

FLORIDA WILDLIFE

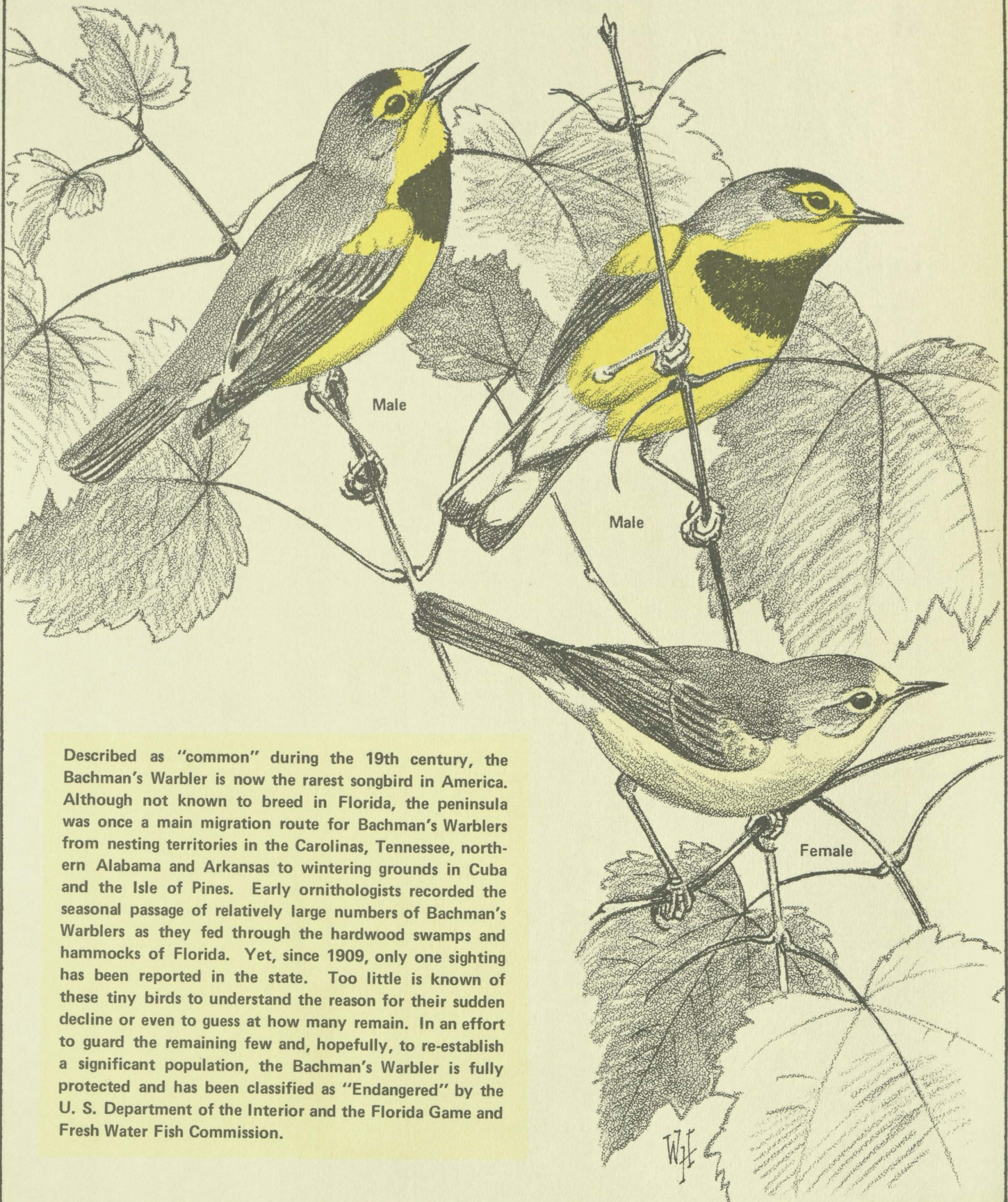
SEPTEMBER - OCTOBER 1977



ENDANGERED FLORIDIAN

BACHMAN'S WARBLER

Life Size



Described as "common" during the 19th century, the Bachman's Warbler is now the rarest songbird in America. Although not known to breed in Florida, the peninsula was once a main migration route for Bachman's Warblers from nesting territories in the Carolinas, Tennessee, northern Alabama and Arkansas to wintering grounds in Cuba and the Isle of Pines. Early ornithologists recorded the seasonal passage of relatively large numbers of Bachman's Warblers as they fed through the hardwood swamps and hammocks of Florida. Yet, since 1909, only one sighting has been reported in the state. Too little is known of these tiny birds to understand the reason for their sudden decline or even to guess at how many remain. In an effort to guard the remaining few and, hopefully, to re-establish a significant population, the Bachman's Warbler is fully protected and has been classified as "Endangered" by the U. S. Department of the Interior and the Florida Game and Fresh Water Fish Commission.

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From a painting by Wallace Hughes

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Photo by Lovett Williams

By Doug Alderson

The Mysterious Cypress

In many lakes, rivers and swamps from extreme south Florida to Delaware, the unique cypress tree, notably the bald cypress, prevails.

This ancient, pyramidal tree of the coniferous redwood family, which sometimes reaches a height of 150 feet, adds a mysterious splendor to the wet wilderness. At sunrise, where cypresses are shrouded in white mist and silhouetted against the early morning light, one can imagine this primitive species of tree existing since the dawn of time.

Gray clumps of Spanish moss usually droop from the upper branches and the longer strands of the stringy moss spiral around the ash-gray or reddish brown trunks to the water below. Some of the trees' trunks are slightly arched, with twisted arms outstretched toward the sun. Some cypresses seem to be weeping, their limbs heavily laden with moss and slouched earthward.

Turtles and alligators frequently slide into the dark water from exposed cypress knees and roots, creating gentle ripples that reflect dancing flashes of light on the wood.

Each part of this majestic tree provides count-

less homes for wildlife. Red-bellied woodpeckers methodically move up the trunks, chiseling holes in the hard wood, then spearing insects with their barbed tongues.

Turkey vultures crouch in high cypress branches as eagles and hawks eye the squirrels that run up and down the scaly bark. Kingfishers plunge and dart between the trees from lookout branches and white herons and egrets arrange themselves nobly on the feathery crowns.

Even the peregrine falcon, usually a cliff-dwelling bird, occasionally nests in hollow bald cypress in the northern states.

One of the few nesting grounds of the wood stork is protected in Corkscrew Swamp, a 10,000-acre National Audubon wildlife sanctuary south of Fort Myers. It contains the largest tract of virgin bald cypress in North America. The stork makes his nest in the high trees and feeds on minnows, crustaceans, mollusks, tadpoles, frogs, small mammals, insects, seeds, and even occasional small alligators. All of these animals thrive in the protected cypress swamps, such as Corkscrew, which is part of the Big Cypress Swamp.



Photo by Wallace Hughes

Cypress trees are unique as well as beautiful with their fluted, tapering trunks, above. They're the only southern conifer which sheds leaves (opposite).

(continued on next page)

bald cypress. Shallow roots spread from the bases laterally, burying themselves in the sandy soil or peat at the bottom of the swamp, river or lake.

From these roots grow the "knees," curious protrusions which may be a few inches to several feet tall. The oddly-shaped knees can resemble unusual natural and man-made creations and form intriguing shapes and designs.

The mystery of the knees even has scientific minds baffled. Botanists believe they help stabilize the tree—but not all cypresses have knees. It has been hypothesized that knees are aerating organs through which gas exchange occurs with submerged roots. Some experts feel they are just useless growths, like warts. None of these theories have been proven.

Knees do serve, however, as useful sunbathing and nesting spots for various animals and insects. Bees make honey in the knees and the bottom dwelling Pomacea snail lays its pink, pearl-like eggs there in clusters. The knees and swollen domes of the cypress are good cover for fish and

ducks, making stands of cypress favorite places for hunters, fishermen and observant nature lovers.

If one paddles a canoe silently through a still cypress swamp or lake edge, the natural splendor and sounds are greatly intensified in the undisturbed primitive setting. Perhaps the most intriguing cypress to observe is a dead, hollow one, usually riddled with woodpecker holes and standing upright by only a few thin segments of unrotted wood.

They are homes for raccoons, spiders, hornets and, on the upper branches, ospreys. Dead cypress trees are favorite nesting spots for ospreys. Few pairs of these majestic birds settle in live trees. Their shrill, whistling calls echo through the trees as they swoop down from sprawling platforms to catch fish in the dark water below.

Indian tribes in the South hollowed out fallen cypress trunks for canoes and valued the light, durable water resistant wood as did white settlers. By 1920, Americans nearly devastated virgin stands of cypress in Florida. By the peak year of 1913, one billion board feet were milled. In Okefenokee, loggers removed 400 million board feet alone.

The strong wood was mainly used for ship construction, pilings, boat docks, bridges, crossties and greenhouses. It was easily shaped and violins and others instruments were made from it. Even cypress knees were taken, being prized for polished lamp bases. But the natural lamp base craze faded and the virgin trees were exhausted, thus ending an era.

New trees grow slowly—about one foot a year—so they were not replanted as crops as are fast-growing pines.

The bald cypress is monoecious; that is, the pollen bearing (male) and the seed producing (female) flowers bloom on the same tree. The seeds are winged and are carried by air currents, but many seeds are eaten by squirrels and wild turkeys before they have a chance to sprout. The cypress is the only southern conifer that sheds its needles in the fall.

During the dry months when many rivers are low, one can walk through the dry beds and marvel at the circular patterns and textures of the exposed roots and knees. The swollen bases and knees correspond closely to the average high water mark, so they are best developed in areas where water fluctuates frequently.

Freshwater settings are truly enhanced by the picturesque cypress and these trees are important habitats for animals and air plants such as Spanish moss and orchids. While man has admired cypress trees for their strength and durability and used them as an important crop, they are still a part of the wild, wet places of our country and benefit man and wildlife alike. ●

Photo by Lovett Williams



A study in extremes—mature but dwarfed cypress in the Everglades (lower left) and cross section of ancient bald cypress (above left). No southern swamp would be complete without cypress knees (above) but, while they are familiar to most people, no one knows exactly what they do.

Hunting

Doves At A Distance

shooting within range, a virtue of a good hunter



By CHARLES DICKEY



Photo by Wallace Hughes

It takes from five to six shells fired to bag one mourning dove. Some surveys say it's even more.

While we don't go to the field strictly for score, we're happy when we shoot well. There are usually other hunters around who count the number of times I shoot and later check my bag. If I have a good ratio of shells expended to birds bagged, I like to be asked how I did. If I have a lousy afternoon, I may sneak out of the field.

What's a good score? Well, that depends on how much dove shooting you've done. Beating your usual average is enough to give you a feeling of

elation. I think any shooter who gets his limit of 12 doves with a box of shells (25 rounds) deserves some attention and compliments. If it takes you two boxes of shells to fill out, you're still better than average.

There are a lot of little things we can do to improve our shell-bird ratios. Being an outdoor writer, I remind my readers each autumn to practice at a local skeet field before the dove season opens. Then I get busy and fail to do it myself.

It's still a good idea. The hunter may not have fired his shotgun in months. A few rounds of skeet sharpen his reflexes. For the beginning or casual shooter, it is much easier to learn the fundamentals of shotgun handling on a skeet or trap field or some sort of clay-target game. In fact, the worse place to learn to shoot a shotgun is in a dove field.

For the average shooter, the most difficult dove is one flying straight at him. The number eight station in skeet is a clay target flying almost directly to him. With the help of an experienced skeeter, he can quickly learn to handle this shot. He understands what he is supposed to do, finally does it and remembers. He can then convert this to incoming doves and it is likely this will be his easiest shot.

For an incomer, you start the muzzle behind the dove, swing through the bird and as it blacks out you pull the trigger and follow through with your swing. It's a simple shot yet many strictly field shooters are buffaloed by it for years.

One of the most important steps we can take is learning to estimate range. Then we only take shots within a compatible range for the choke we are using.

You yourself have laughed at shooters potting at doves 70 and 80 yards away. You know they're wasting shells. I laugh when I see hunters firing at ranges greater than 45 yards. I know the average hunter cannot consistently cleanly knock down doves at 50 and 60 yards.

In another very real sense, it is not a laughing matter. There are about 50 million doves bagged in the United States each year. There are another 13-14 million lost through crippling. Much of this horrible loss is caused by skybusters and shooters who will not accept their own limitations and do

not understand the limitations of their shotguns and loads. It's poor sportsmanship.

Now, I know there are a few hotdogs who can take full-choked shotguns and knock down doves at 50 and 60 yards. The average shotgun owner cannot do this. In fact, he has trouble hitting doves at 30 yards. So do I but long ago I accepted this fact and I leave the distant dove alone.

It has helped my shell-bird ratio a great deal to set up range markers around my stand as soon as I select a spot. I pace off yardage to a tree, stump, prominent weed or fencepost in a circle around my blind. These are guides, or markers, to help me estimate range.

In recent years, I have begun carrying extra handkerchiefs to the field as markers. Sometimes I take straightened coathangers with strips of red or orange and stick them in the ground.

Let's say I am using a shotgun with a modified choke. My markers are placed at 45 yards in a circle around my stand. Four markers are helpful but eight are much better. I draw the imaginary perimeter line with my imagination and decide, before the doves start flying, that I will not shoot at a dove unless it comes inside my circle.

Doves are small, fast and approach in varying light. It is not always easy to estimate their range. The markers help.

If I am using an improved cylinder choke, I put my markers at 35 yards. There are few times that I ever use a full choke. The dove that slips in on top of me and wraps me up in knots must be considered. A full choke is too tight but the other chokes will give me a better chance, especially the improved cylinder which quickly spreads.

When my marker circle is set, I know that any dove that flies inside the perimeter is within range. Obviously a dove 80 yards straight up is not in range but I'm talking about the average height at which they approach.

Let's say I'm using a modified choke and my circle is at 45 yards. I start to mount my gun on an incomer as the bird crosses the perimeter. By the time I pull the trigger, the dove is only 30 or 35 yards from me. This lag in my reaction time takes care of any extra range distance because of the dove's altitude.

By using a marker as a guide in range estimation, my mind is free to concentrate on the shooting process. I am sure the dove is in range and I don't have a doubtful mind and balk. But more importantly, the markers keep me from taking shots beyond my capabilities and that of my shotgun choke.

In most kinds of dove shooting, we get in one spot and let the birds come to us. To increase our chances of birds flying inside our perimeters, we use cover, blinds, try not to make spooking movements and wear camouflage. We try not to let the birds see us until they are in range and it is too late for them to do much about it. In fact, our best chance of killing a bird cleanly is to shoot one which is totally unaware of our presence. A dove can do a lot of highballing and jinking in half a second.

As for the gauge of a shotgun, the beginning or casual shooter should use a 12-gauge. The diameter of a shotgun pattern is the same whether it is a 12, 16 or 20-gauge where the same choke is used. The

(continued on next page)

Photo by Charles Dickey



Most successful dove hunters use cover or a blind to allow birds to fly in unaware of their presence. Chances for a good shoot are increased even more by sitting still and quiet because once a dove is spooked, it takes a good hand with a shotgun to connect.

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density of the pattern is higher for a 12-gauge. A 16-gauge is denser than a 20-gauge.

It is all right for an experienced shooter to use a 20-gauge. He is apt to hit his birds with the center of his pattern. The beginner is likely to hit the bird with the edge of his pattern, either the front or back, top or bottom. He needs the extra shot density.

For a 12-gauge shell, I think a standard field load is adequate, as long as the shooter is shooting at less than 45 yards for a modified choke and 35 or less for improved cylinder. There is no need to go to high-brass or high-power 12-gauge shells and certainly not to 2¾-inch magnums. The shells cost more and you get banged around more.

If a shooter wants to use large loads to increase the density of his patterns for compatible ranges, then that's fine. If he uses the heavier loads because he thinks this will give him some magical ability to kill doves at 60 yards, he's living in a fool's paradise.

As for shot size, I don't think it makes much difference as long as the shooter confines himself to shots within the range his choke was designed for. No. 8 shot is a happy medium. It does just fine for 99 percent of the field conditions you'll shoot under.

I can't ever recall seeing a piney woods Cracker, a swamp rat or an Appalachian ridge runner who carried his knife in a belt sheath. These people who live close to nature would no more leave their knives at home than they would forget to put on their britches but they tote their hunting and utility knives in their pockets.

Maybe only city dudes wear hunting knives on their belts. Whatever kind of hunting knife you prefer, there is a confusing number of them on the market. One large manufacturer lists more than 600 models in his catalog.

It's getting stylish among status-seeking hunters to pay \$100 to \$200 for a hunting knife. Knife collecting has become a national fad. One sales manager for a knife company told me he could sell knives priced at \$35 to \$50 easier than less expensive knives.

Even if I could afford to pay \$100 for a knife, I would not. I can't keep one long enough to justify that expense. I don't lose them in the woods but in my house. If I could ever find them all, I'd have enough to be a collector.

Recently I've done some investigating with knife experts and it's a pleasure to report that there are a lot of good knives on the market between \$10 and \$20. They have quality steel, sharpen easily, retain an edge and most have good safety features.

Old Timer knives have long been favorites with outdoorsmen. I've always liked the Folding Hunter Mustang with lock blade and overall length (closed)

of 5¼ inches. It's now priced at \$18 with sheath. Most hunters carry it in their pockets. It's an excellent skinning knife and ideal for general outdoor use.

Old Timers, made by Schrade Cutlery, have increased in price because they are hand finished with over 135 operations. Deacon Ernst, product manager for Schrade, told me he realized a lot of sportsmen still want a quality knife with no frills at a low price. That's why they've come out with a whole new line called the Frontier series. The knives carry a 25-year warranty.

The Frontier knives sell at almost half the price of Old Timers because they are machine finished. The blades are made of high carbon 1095 butcher steel. They are precision-ground, heat-treated and tempered to a uniform hardness of 57-59 on the Rockwell C scale. The cutting edge is then hand-honed.

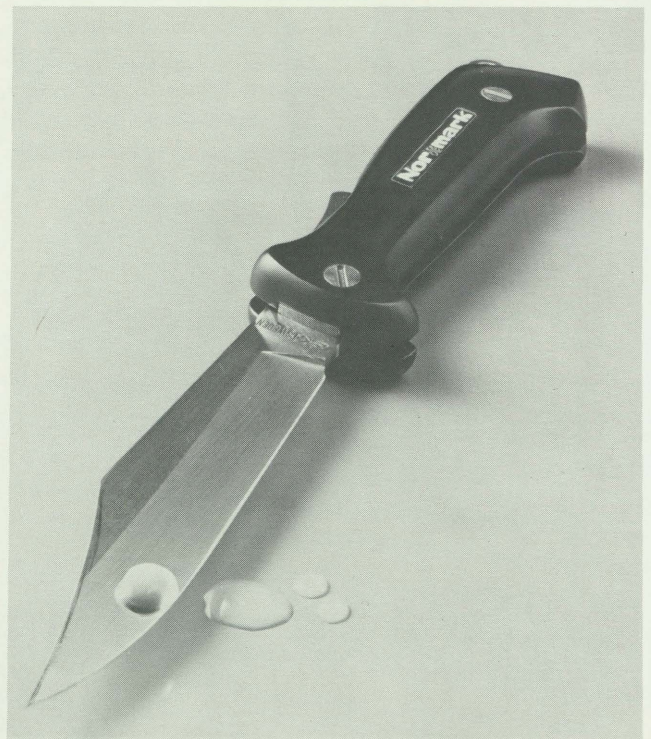
I like the Frontier prices. When I lose one, I can withstand the financial shock.

Another knife to check is the presentation Big Swede which sells for \$15.00. It's made by Normark, the company which makes Rapala lures and knives.

The knife breaks down completely for easy cleaning by simply turning a couple of screws. The 4-inch saber-style blade is made of Swedish stainless steel. The grips are made of molded plastic with a good guard to prevent your hand from slipping onto the blade.

The Big Swede folds to an overall length of 4½ inches and can be carried in your pocket or worn on your belt. When the blade is extended, it has an excellent locking system. ●

Big Swede folding knife





BIG MAMA—LITTLE DADDY

By Steve Smith and Joe Crumpton

No way that little bitty fish can produce baby fish. It's just a baby itself."

And, as if that settled the matter beyond a shadow of a doubt, the weather-beaten old bassmaster closed the book on the long-standing controversy about the spawnability of the largemouth bass. Or did he?

The question of the spawnability of bass has been a bone of contention among biologists as well as bass fishermen for many years. (However, possibly for the first time in the history of sports fishing, the biologist and the bassman agree.) They tend to believe that maturity in bass is related to age and size. The rule of thumb is that a bass has to be at least 12-inches long and two years old for its first-time mating and spawning. Well, at least in Florida waters, that "ain't necessarily so."

Facts to the contrary recently came to light while monitoring some hatchery pond experiments. For example, in one study a 6-inch male was observed spawning with an 18-inch, 4-pound female, and in another wholly separate study small males were seen guarding nests in six controlled ponds.

In the "big mama—little daddy" study, many of the fry produced were eaten by bream, yet the pint-sized male did protect hatched eggs and small fry until they began to swim free.

This break-through prompted another study involving seven ponds using selectively bred bass stocked as fingerlings.

At eight months, males were observed "sweeping" nests in six of the seven ponds. At the end of nine months, six of the seven study ponds were drained. Male and female bass recovered averaged between 6 and 8 inches in length. Every fish was found to be in reproductive condition.

At the end of ten months, the seventh pond was drained. Sixty-five fish had survived. Although the average length of fish in the pond was 8 inches, several bass were still less than 6 inches long. The smallest spawnable bass was a 4½-inch, 3-ounce male. Sixty-three of the bass were still in reproductive condition and 21 nests were counted on the pond bottom. Three different sizes of bass fry were collected, indicating that some of the fish had spawned at least once.

To the everyday bassman, these findings may appear technical, even questionable. True, they were

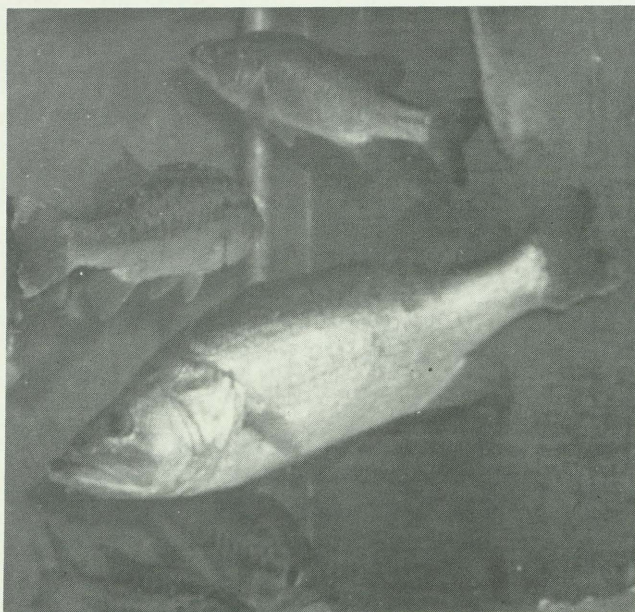
studied by the Commission's bass investigation team; but actually, they are neither technical nor doubtful, but simply fact-finding. Bass definitely reach maturity and spawn at an early age and small size, particularly under favorable food and habitat conditions.

The dirt-bottomed ponds were prepared by standard hatchery methods, suitable forage was stocked and protection was afforded the stocked fingerlings. But from that point on the fish did "their own thing."

The facts are convincing. They serve to revise long-standing notions about spawning in bass. Although the events occurred in hatchery ponds, they are in no way limited to that type of situation. Such conditions obviously exist in innumerable natural lakes and ponds. Early sexual maturity, in the largemouth bass, can and is occurring in popular fishing waters.

Gist of the matter for the "bassman" is that the species is prolific and can survive, multiply and thrive wherever given a sportsman's concern and protection. Thus, no bass is unimportant, whatever its size.

Maybe, the old bassmaster, if he read this far, will agree "that a little bitty fish can produce baby fish" after all. ●





Lostman's River Country, Everglades National Park

Photo by Selbypic, Inc. Tampa

PILOT'S-EYE VIEW

By Ken Musson

Interstate expressways carry more and more visitors to the tourist centers of Florida each year, and at the end of the concrete roadways are the motels and shopping centers, condominiums and restaurants providing a make-believe habitat for fun in the sun.

For those who stick to the highways and developed places, it's easy enough to adopt the cynic's viewpoint that the Sunshine State has become a vast concrete and plastic playground. But there's another Florida out there, and I recently looked down on it from the co-pilot's seat in a light plane piloted by my friend, Bill Morris.

We didn't start out that day to look for the Florida most people dream about. We were on our way to Miami from Tampa, hoping to be able to take some photographs of the city that Flagler founded.

But Bill doesn't like to fly a straight line.

"Let's take a look at the new Florida Power and Light plant on the way out," he suggested as the wheels left the runway at Peter O. Knight Airport. "You should see the lake they have there. It's the biggest man-made lake in the state."

Whether or not it's the biggest man-made lake in the state or not, the water backed up on the Manatee River is impressive. And more water was being pumped into the overgrown pond that day. The morning sun was still casting a long shadow on the lake's surface and I couldn't help but wonder if the bass and bream down there were beginning to stir around in the brightening light.

Bill took a picture or two (he just can't help taking pictures of such places) and decided to turn once again in the general direction of the Gold Coast.

We took the roles of bush pilots once more. From 1,000 feet—sometimes less—the pasturelands

of eastern Manatee County looked cool and restful. And as we played leapfrog with scrub oak hammocks and pines, some of Florida's finest ranch country passed beneath. The cattle we saw seemed hardly impressed by our passing plane. They munched the bahia grass with seldom a glance our way.

Then, just inside DeSoto County, Bill came suddenly alive.

"Look at that," he implored. "Lookatthat, lookatthat!"

He was drawing attention to a pair of deer, standing undecided in the middle of a small bit of pastureland, their eyes intently following the passage of our plane above them. Unlike the cattle, they were impressed, uncertain whether or not to freeze in their tracks and hope this intruder has not spotted them or to bound toward the relative safety of nearby trees.

Next loomed the Caloosahatchee River. Like an east-west highway stretched into the morning sun. Some boats skimmed its surface. Others floated at the end of a tether while fishermen sought whatever quarry they might find beneath the surface.

The Caloosahatchee has become so popular among yachtsmen traveling between the coasts it even has motels along its shores catering to them.

At Clewiston, the waterway bulges to become Lake Okeechobee, then it narrows again as the St. Lucie Canal to provide access to the Atlantic Ocean.

Even the lake has felt the hand of man who has cut a swath across it to provide deep water for his boats. But not even that can wipe away its majesty. And those who use it, whether they're on yachts or in skiffs, are quick to wave their friendship to airborne travelers as they would another boatman.

It is at the lake that the airborne traveler finds his first real advantage over one who travels by road. Everything before the huge lake could have been experienced to some degree from an automobile. But that changed at the lake. From the air, the lake becomes more like a small ocean than it appears from the roads which rim it. Too often, the view from the roads is obscured by the dikes or by buildings or trees. From the air, the view is of water and the way the wind stirs its surface.

Then, suddenly, we were over the east coast, which burst upon us in a frenzy of those condominiums, shopping centers and parking lots. But even among the glitter of the carpet of concrete and glass can be found a natural gem or two. The Atlantic Ocean, splashing itself on the beaches of Fort Lauderdale, Hollywood, Miami, is breathtaking from the air.

One might look, turn away and look again, then ask himself, "Was it really that blue the last time I looked?"

And somewhere around North Miami, or perhaps Hollywood, there is a stretch of beachfront

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Ten Thousand Islands in the Everglades

Florida Dept. of Commerce Photo



**"it's easy enough
to adopt the
cynic's viewpoint
that the
Sunshine State
has become a
vast concrete and
plastic playground.
But there's
another Florida
out there"**

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where green bushes stand guard between the houses and the ocean for perhaps a half-mile or so.

Just a few miles to the south is Elliott Key, a Sunday boat ride from Miami. It is the first major island in the Florida Keys and a popular gathering place for seagoing families bent on a picnic, fishing or diving.

From there around the tip of the state, along the north shore of Florida Bay, the state is undeveloped. Man is a visitor here. As the Everglades National Park, the land is protected from man's encroachment. It remains much as it has been since before the Spanish treasure ships passed along the Keys to the south. There is a roadway permitting travel between Homestead and Flamingo at the southern tip of the finger. But the motorist isn't likely to see much of Florida Bay.

Even the men on the bay in small fishing boats aren't likely to see many of the large fish that swim near them, even though the finny denizens are readily apparent to an airborne observer.

Few signs of man can be found flying along the coast from Flamingo to Everglades City some 60 miles or so to the northwest in the heart of the Ten Thousand Islands area.

Bill and I spotted a fisherman working from a skiff near the mouth of the Shark River and a couple of other boats a little farther north near what our chart designated as the Broad River.

The ranger station at Lostman's River is a half-way stop-over for those who make the trip by water, and it stands out sharply in its remote loneliness.

The names given the waterways which provide a lacework pattern to this part of the coast are misleading. Shark River, Broad River, Harney River, Lostman's River all suggest cypress tree-lined streams meandering back into the depths of a forbidding swamp, waiting to swallow up the unwary traveler.

In truth, they are part of a delta-like network of channels which forms the mouth of the "river of grass" called the Everglades. That huge expanse of marsh is constantly drained by nature across a plain almost as wide as the state with a relentless flow to the sea. Beneath the sawgrass of the interior and the cypress and mahogany closer to the coast, the water moves along its journey, often just below the surface.

Here, where the mangroves mark the coast, the water has dug the arteries which carry it on to meet the salt water, but they are not true rivers, and the water movement is more a result of tidal action than of river currents.

But because they are channels and because here the water is deeper—maybe a foot or so compared to the inches or less covering the inland sawgrass roots—some of the islands are high enough so palmetto clusters have taken root and clean white sandy beaches offer their temptation.

Photo by Selbypic, Inc. Tampa



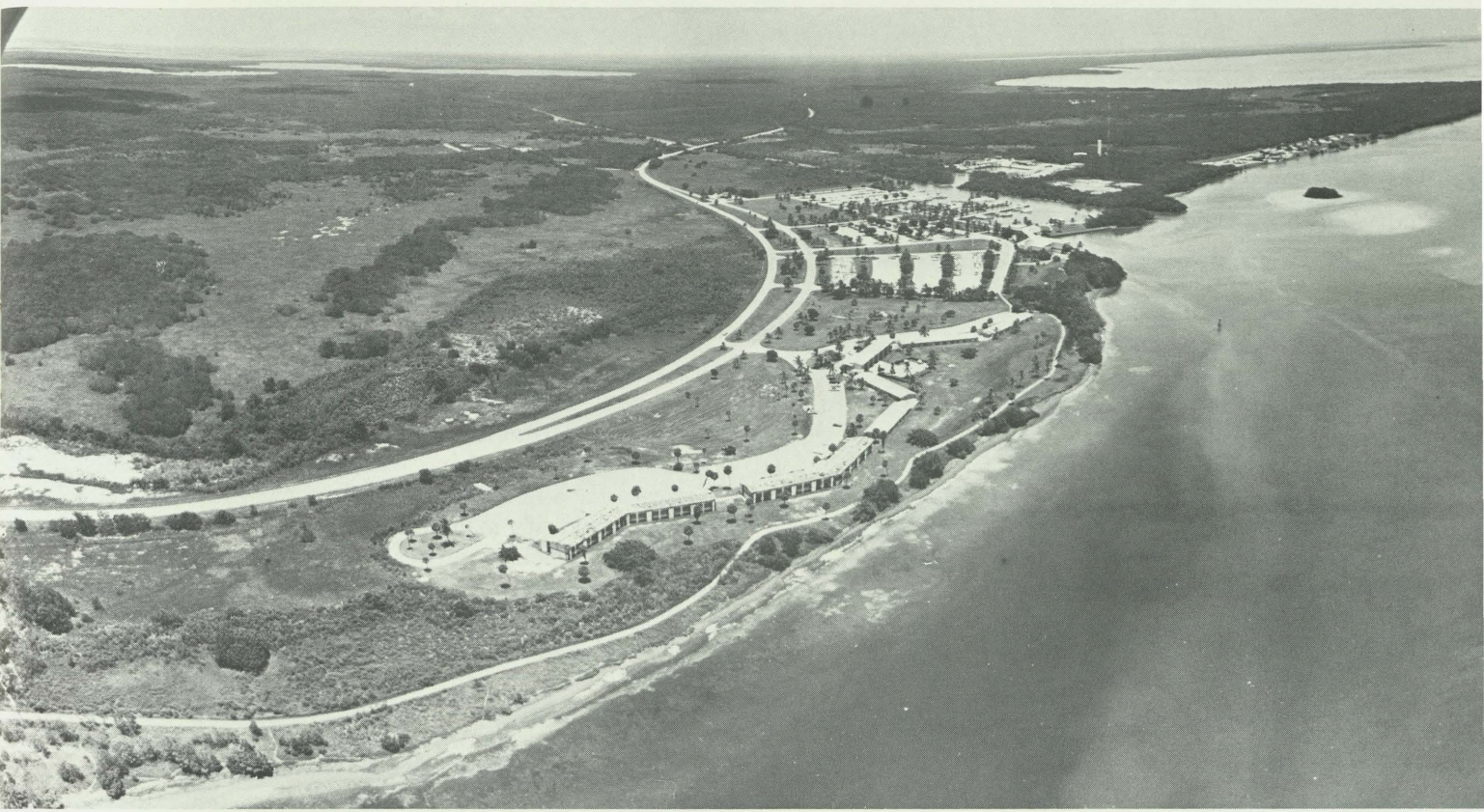


Photo by Selbypic, Inc. Tampa



Photo by Leonard Lee Rue III

From an airborne vantage point, many things can be observed that might escape the notice of travelers in car or boat. Cattle never seem to be aware of a plane overhead. Deer (left) definitely take notice and either freeze in place or bound away to nearest tree cover. Looking down at Elliott Key (far left), part of the Biscayne National Monument. Pilot's eye view of Flamingo (above) located at the southern tip of Everglades National Park, which is on Florida Bay.

But a mile or so inland a thick cover of trees grows right out of the water in most places and the sight makes one hope the plane's engine will continue to perform.

As we continued our journey, we dodged thundershowers by flying inland at Everglades City, brushing treetops in the Big Cypress Swamp and taking our bearings at the Tamiami Trail and at Alligator Alley. Even with those two highways cutting through the Everglades, there's still a lot of land where deer, panther and other game outnumber man.

True, the vastness of the Everglades gave way to the fast-growth residential areas around Fort Myers and much of the lower gulf coast. But even along the man-made canals the sunshine glows as warmly and as welcome as it does on the mangroves and the palmettos. And the sand of any beach is as soft to the feet of a sunbather who reached it by car as it is to those who travel by boat.

It's all Florida. It's all still right out there. The cynics who believe otherwise simply need another vantage point. ●

Strange Ways Animals Eat

You may think eating is the simplest and easiest thing animals do. But when you think about the strange food they eat and the strange places they eat it you may wonder how some of them manage to eat at all.

The big, clumsy walrus of the far north stands on his head much of the time to eat. He dives into the sea until his head reaches the bottom. There with his big tusks he rakes up clams and other shell food. He sweeps the food into his mouth with his upper lip and strong bristles. Standing on his head under water, he doesn't spend much time chewing. He cracks the shells with his back teeth, and swallows the meat along with the broken shells, sand and mud. His stomach sorts out the meat and digests it, and then throws up the waste which he spits out of his mouth.

If you watch a snake eat a big meal you may have trouble believing your eyes. Its mouth may look like it could get nothing in it larger than a small mouse. Yet, as a rule, snakes probably swallow whole prey bigger than most whales do. If you were watching a boa you might see it swallow a deer or sheep. You will never see a snake chew its food, unless you happen to watch a member of only one rare species. They have no teeth for chewing. They use their teeth only for defense and holding. So they must swallow their prey whole. And this prey may be several times larger around than the snake.

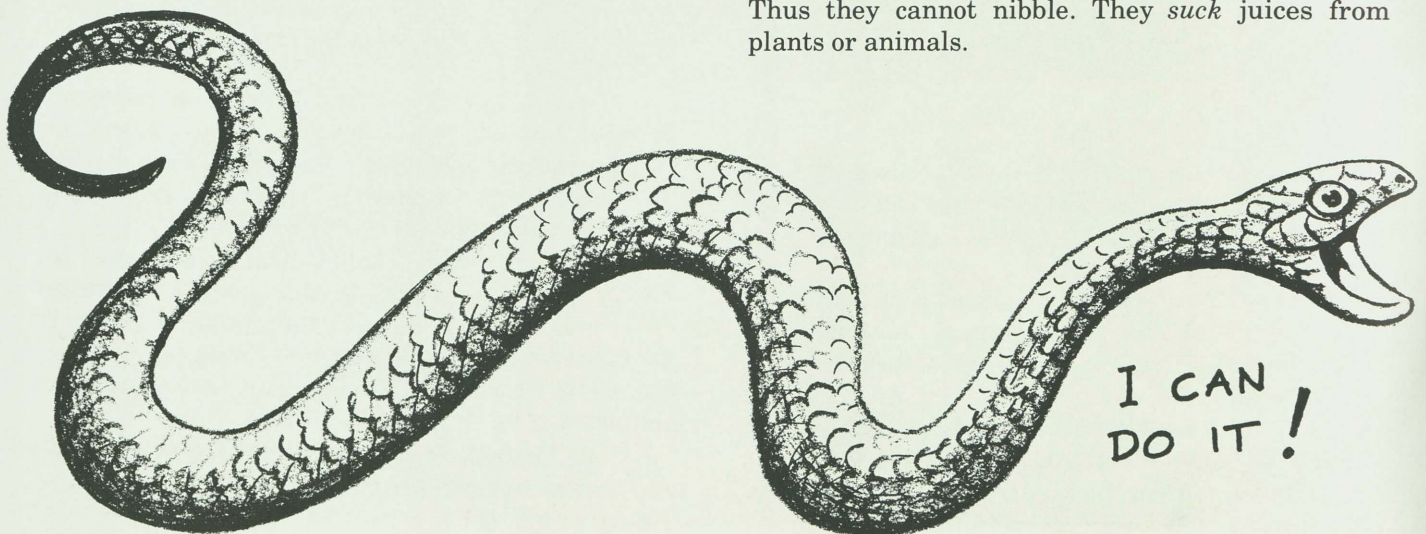
To swallow such a huge mouthful the snake separates the front ends of its lower jaw. This is easy for it because the ends are held together only

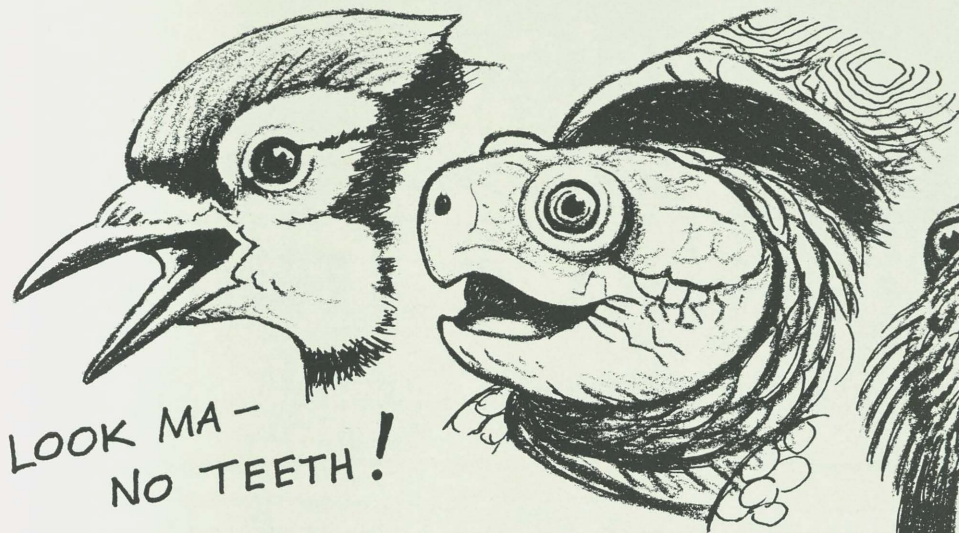
loosely by a ligament that stretches like a rubber band. At the back of the mouth the snake unhinges its upper and lower jaws. Without bones to hold the mouth in shape it becomes a monstrous opening. The snake pulls the prey inward with the jaws on one side while pushing the set on the other side forward for a new grip. Thus, in seesaw fashion the snake works its meal into its mouth and into its stomach, which stretches like rubber to several times its normal size.

If you have watched a snake eat you possibly wondered, before the long meal was over, how it breathed while its mouth was so full and stretched so tight. It breathes through an extension of its windpipe that runs along the floor of the mouth out beyond the lower jaw. It takes in air through this extended tube as a diver breathes through a snorkel tube. And to protect its delicate, slender tongue under this enormous pressure the snake draws it back into a sheath. Fortunately for the snake, such big meals may last it for several months.

Snakes swallow eggs whole. Most of them break the shells by wrapping themselves around a tree or limb and tightening their bodies until the shells break. Some have spike-like projections on their backbones which push through tissue and project into the gullet. Here by compressing muscles the snake "saws" the eggs in half.

A snake is not the only animal that does not use teeth for chewing. Actually, more animals eat without teeth than with them. Birds and turtles have no teeth. Many insects, such as grasshoppers and cockroaches, have gizzards that grind their food. True bugs, order of *Hemiptera*, have no jaws. Thus they cannot nibble. They *suck* juices from plants or animals.





LOOK MA -
NO TEETH!

Some spiders, like snakes, have teeth only for defense and holding prey. But they, as a rule, live on a liquid diet. The spider injects a digestive juice inside the body of its prey. This fluid dissolves the tissue it comes in contact with. The spider then sucks out its meal as soup.

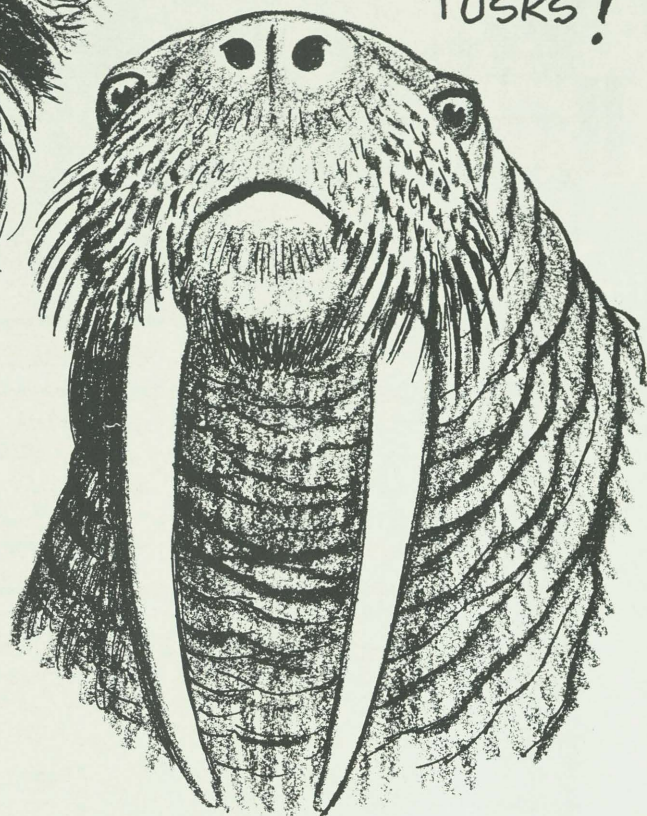
The larva (maggots) of true flies are meat eaters. They emit a chemical that dissolves meat. The larva then absorbs the liquid food.

The lamprey also lives on a liquid diet. It has no jaws. Its mouth is a suction cup with a tongue full of cone-shaped teeth in it. When the lamprey wants a meal, it attaches itself to a fish with its suction cup mouth. Then it rasps the body of the fish with the teeth on its tongue. Through the opening made, the lamprey sucks out the body juices for its meal.

A mosquito, to get a meal, pierces your skin with a complex set of lances, six in all. She keeps them neatly enclosed in a sheath. To be sure she will not miss a meal, once the lances are used, she injects a chemical which keeps your blood from clotting.

The matamora turtle makes like a vacuum cleaner to get a meal. Its jawbones are weak and

WALRUS WITH
CLAM DIGGER
TUSKS!



Drawings by Wallace Hughes

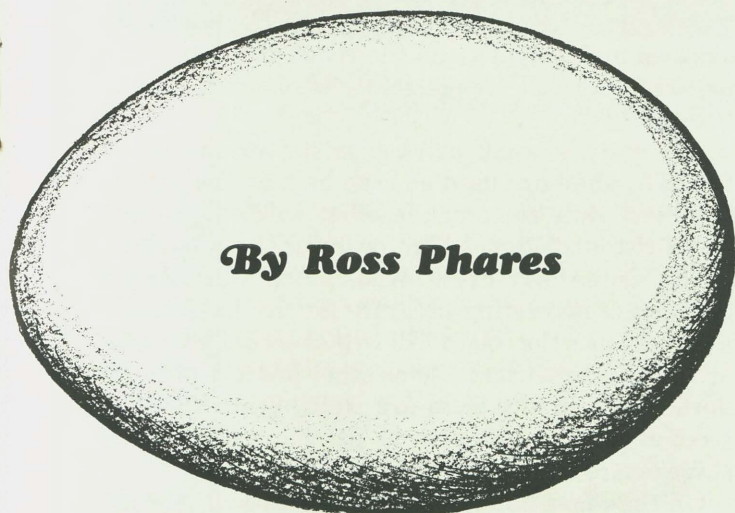
rubbery. They serve little more than to help make a big loophole for a mouth. But it makes such a strong suction when it opens its mouth that a flood of water rushes in carrying everything about it that is not anchored. Later the turtle spews out the water, keeping any food that came in with it.

You may have wondered how oysters and other mollusks that spend their entire lives stuck to a rock ever manage to eat. They have adapted very large gills that secrete a sticky mucous. Edible animal and vegetable matter flowing through sticks to them and is eaten.

People who have had to go to a dentist to have their teeth adjusted so that they would all come together properly when they eat can appreciate the problem of the sea urchin. It has five teeth that point toward the center of its mouth. They come together like spokes in a wheel at the hub.

A lugworm, to eat, pushes the front part of its alimentary system outside of its body and inside out. Sand sticks to the protruded part. Then it is drawn back with the sand on the inside of the system. The worm takes its food from the edible matter sticking to the sand.

There seems no end to the marvelous ways animals have adapted to the strange needs for eating just about everything in every sort of place. ●



By Ross Phares

Haul Seines, Trawlers & Trotlines

harvesting Okeechobee's renewable resource

In July, 1976, the legislature authorized the use of haul seines and trawls in Lake Okeechobee. The new legislation also provided for the tagging and subsequent sale of certain species of gamefish through a commercial fishery utilization program monitored and supervised by the Game and Fresh Water Fish Commission. Although Okeechobee's fishing is still tops (a 1977 tournament on the lake produced national three-day records for numbers of bass weighed in, for total poundage caught and for the three-day catch by a single fisherman), fishery biologists have found signs of potential trouble. The new fishery utilization program can be a tool to help prevent any serious decline in Okeechobee's sport fishing.

The Chrysler engine coughs, roars to life then settles into a steady rumble. Lines are cast off and the old blue and white inboard tows a string of work boats from the Clewiston marina. Moments later, the boats pass through the floodgates into Lake Okeechobee.

It's 3:00 a.m. A haul seine crew is on its way to work.

Everything is quiet, even the lake's surface. The only disturbance is caused by the boats and the waves marking their passage.

At the wheel of the inboard, R.M. Dupree sights down the line of channel markers and heads for the open lake. The weatherman had forecast winds of 15 to 20 knots, high enough to put a considerable chop on the big lake, but Dupree and the crew have decided to try it anyway.

Dupree doesn't take the weather lightly. He's worked on the lake since 1910, mostly commercial fishing. Twenty-knot winds will just about put his seine crew out of business for the day. Still, they chance it.

Dupree's crew turns north from the channel, crosses a shoal and moves to a spot about three miles offshore. State regulations require them to fish at least a mile from the nearest emergent vegetation or the shoreline.

Soon the men are laying out the 1600-yard-long haul seine.

By 11:00 a.m. they have worked the fish down into the pocket of the net. Using a long handled net, the men scoop the fish into empty boats. Catfish, bluegills, shad, speckled perch, eels, gar, turtles—all are brought aboard. Bass and pickerel are removed from the pocket and released alive.

Although several gamefish species can be legally

taken by commercial fishing methods and sold, the bass and pickerel cannot. The gamefish which can be sold are known collectively as "scale fish."

Soon the pocket is emptied and the towboat is hauling the fish back to Clewiston. Within an hour, the fish are sliding down the chute into Jim Nesbitt's fish house.

Nesbitt is a fisherman who is more enterprising than most. He built a fish house to handle his own haul seine catch, opened his facilities to other fishermen, and soon had a full time business on his hands. He quickly had to double his storage capacity and now runs the largest operation of its kind on the lake.

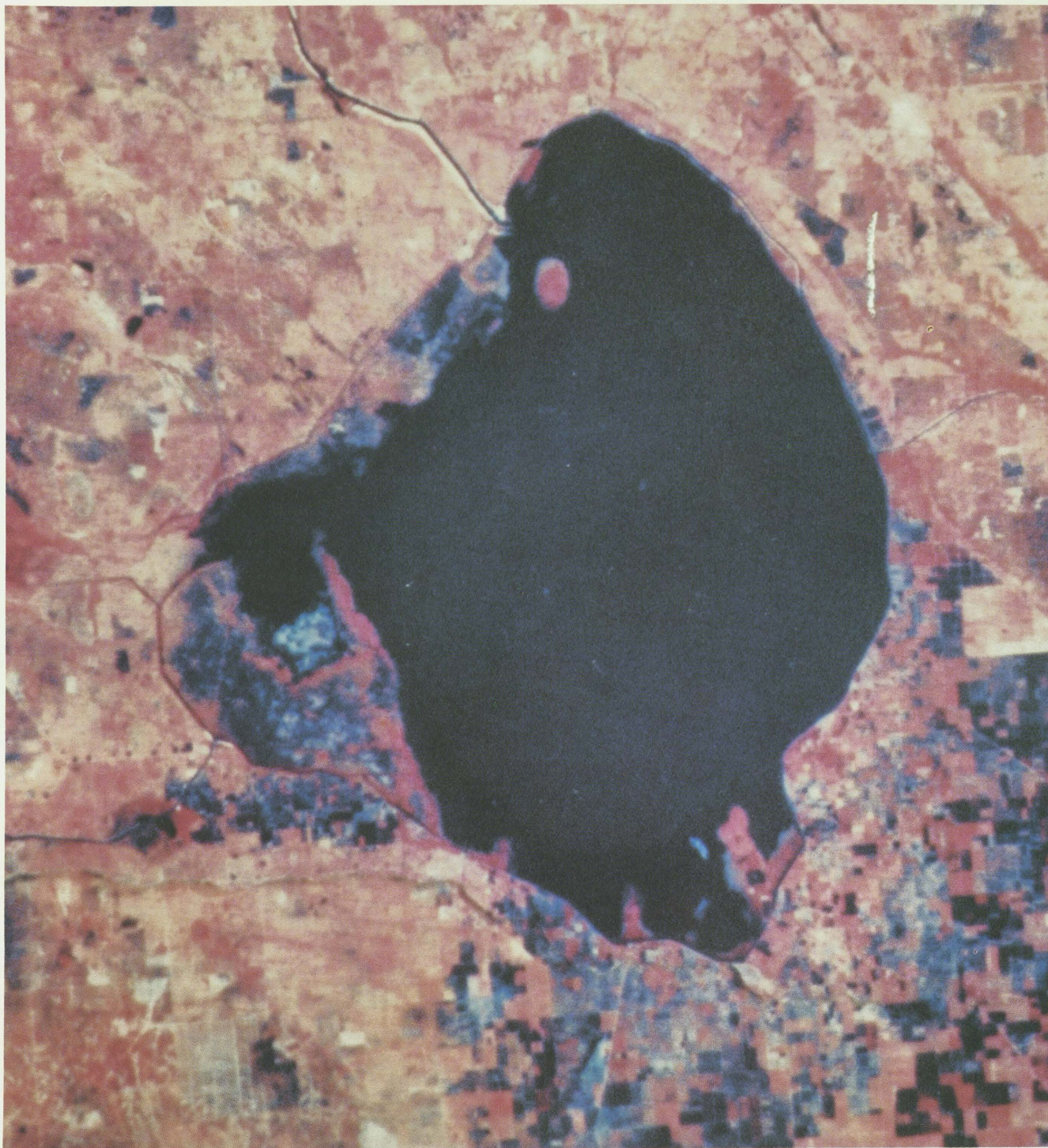
As the fish come down the chute, they're graded and sorted—scale fish, catfish, rough fish such as gar and shad, and undersized scale fish.

The scale fish are immediately placed in vats of ice water to be thoroughly cooled. They are then individually tagged with one-time use metal tags as required by law, then weighed. The catfish are skinned and weighed and the rough fish are either placed in a cooler for possible sale or are hauled to the dump.

Currently a weak market exists for the rough fish. The shad are used as crab bait by the coastal crabbers while some of the other species are used by tourist attraction "alligator farms" as gator food.

The Game and Fresh Water Fish Commission conducts a marketing program for the local industry and hopes the rough fish will eventually be used as pet food, fertilizer or some other product. But, for now, potential investors are waiting for the commercial seining program to get beyond the trial stage before building processing plants.

On the other hand, the scale fish are eagerly ac-



The key to south Florida's drinking water and a long-time sport fisherman's paradise, Lake Okeechobee, above, is now supporting an important commercial fishery.

cepted by Florida seafood buyers. Retailers say they have little trouble selling the fish, even in the summer when many people catch their own.

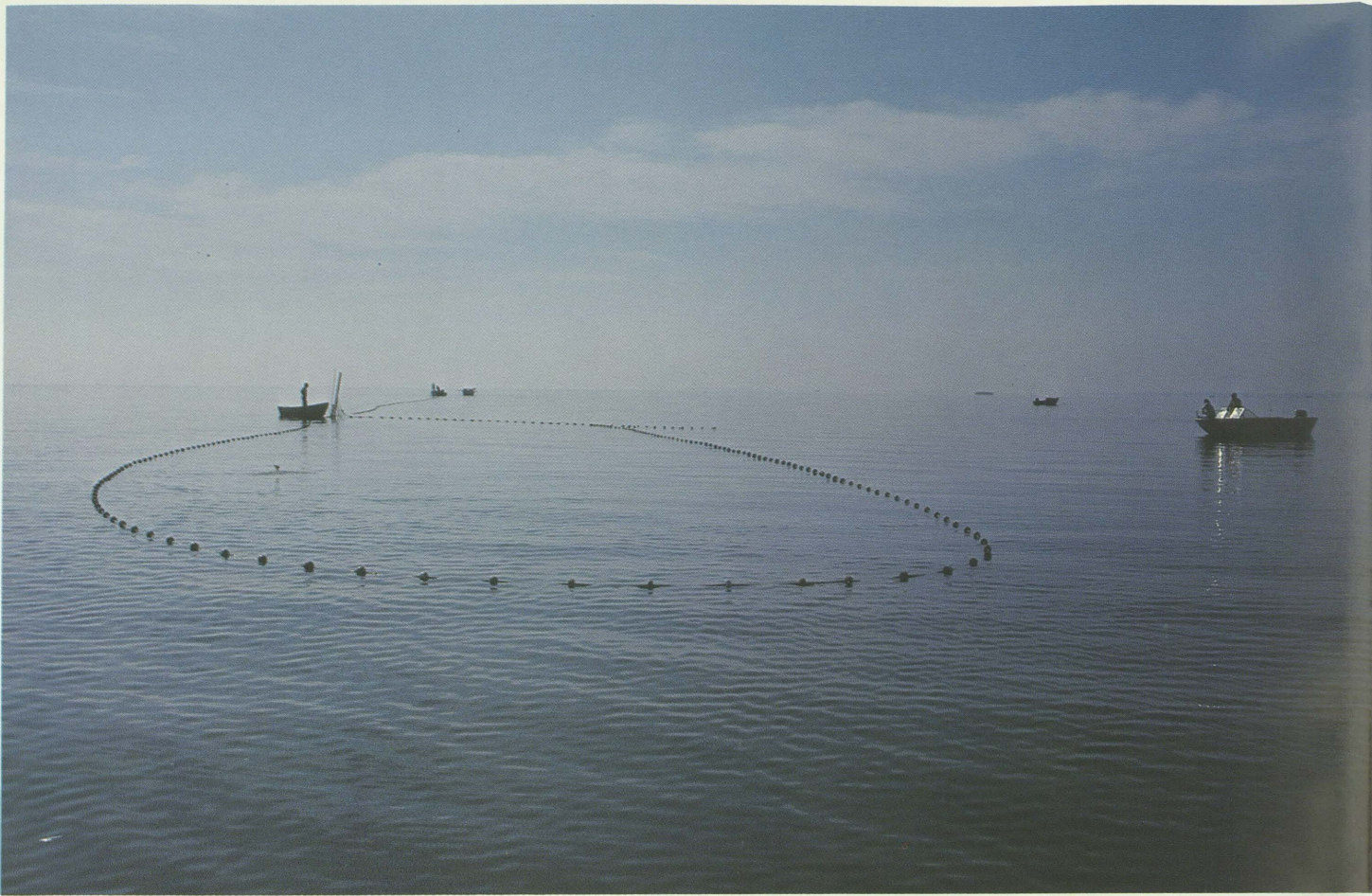
In the first nine months of the program, Nesbitt was spending approximately \$20,000 weekly purchasing fish and paying wages for the tagging crew; a sizeable economic wallop in a town the size of Clewiston.

While the economic benefits of large scale commercial fishing are obvious, there are other possible

By Michael Miller

gains to be made by removing large amounts of fish from the lake. Biologists working on Lake Okeechobee believe the commercial seining program can help to maintain water quality and to im-

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(Continued from page 17)

prove sport fishing as well as utilizing an economic resource which traditionally has been wasted.

Many fishermen tend to agree.

Southwest of Observation Island, in the western half of the lake, a trawler cuts his engine and a Game and Fresh Water Fish Commission wildlife officer eases his patrol boat alongside. The officer is new to the area and doesn't recognize the fisherman.

"Doing any good this morning?"

"Aw, I'm catching a few. Mostly rocks, though."

The fisherman holds up a piece of limestone from the lake bottom.

At the officer's request, the fisherman produces his fishing license and his commercial permit. He also throws in a little Okeechobee history.

"Sam-don't-give-a-damn-Thomas," he says. "I've been guiding on this lake since I was 11. But the fishing got so bad that, last year, I told my folks to quit coming. This year, though, it's starting to pick up again."

Thomas thinks commercial fishing is improving Okeechobee's sport fishing. He said, "My dad commercial fished here in nineteen-oh-seven. I started fishing commercially in thirty-four, along with my dad and a lot of other folks, and the bass fishing never was so good."

Thomas echos an opinion held by many on the lake these days; that commercial fishing can make sport fishing better.

Things haven't always been that way, however. Twice in the past, commercial seining has been made legal in Lake Okeechobee only to be closed by the demands of sport fishermen.

Nothing puts a sportsman's teeth on edge more than the idea of a commercial operation cleaning out his favorite fishing hole. Traditionally, sportsmen have felt that every fish that's taken with a net is one less that might've wound up on their stringers.

But the art of fishing has entered the realm of science. Fishermen now have a direct link with biologists working to improve fishing. Fishery biologists have learned that, under certain circumstances, gamefish populations can be improved by the pressure of commercial fishing.

(Continued on next page)

(Clockwise from top left) Haul seine crew works fish into the pocket; Wildlife Officer Mitch Sellers checks Sam Thomas's commercial fishing permit; fish house workers tag and weight scale fish; haul seine crew dips fish from net pocket while R. M. Dupree (second from right) looks on.

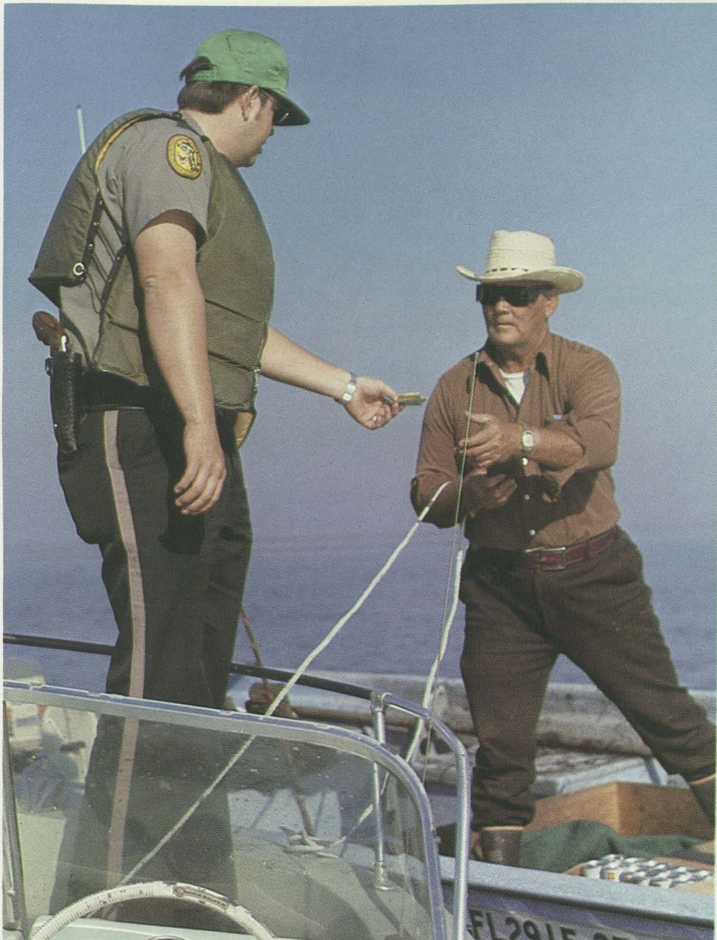


Photo by Michael Miller



Photos by William Greer

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When haul seines and trawls were outlawed on Lake Okeechobee in 1946 due to public sentiment, the Game and Fresh Water Fish Commission began an experimental seining program and an investigation to find out what effect this type of fishing has on lakes.

The investigation grew into a full-scale research program which continues today. Biologists located in the Game and Fresh Water Fish Commission field office in Okeechobee continually monitor the condition of the lake with creel censuses and other sampling methods and by polling fishermen and guides who've fished the lake for many years.

Lothian Ager is the biologist heading the Okeechobee-based fishery research program. He has worked on the lake for more than 10 years, routinely sampling, looking for trends in size and numbers of the lake's various species of fish.

He and other project biologists have found a steady decline in the size of speckled perch, a species which competes with bass as the lake's most popular gamefish.

"It's fairly simple," says Ager. "The fish population is becoming overcrowded with small fish and should be thinned out. The lake is supporting about 45 million pounds of fish and we should be harvesting about half of those each year."

Dennis Hammond, a biologist on Ager's staff, explains that certain habitat conditions are required for each stage in the growth cycle of fish. Overcrowding excludes many fish from premium habitat in the various growth stages, stunting the fish.

Hammond said, "What most people don't realize is that you can't take a four-year-old, five-pound bass and make a world record out of him. The process has to start when the fish is much younger—during the larval and fry stages—and continue throughout its development phases."

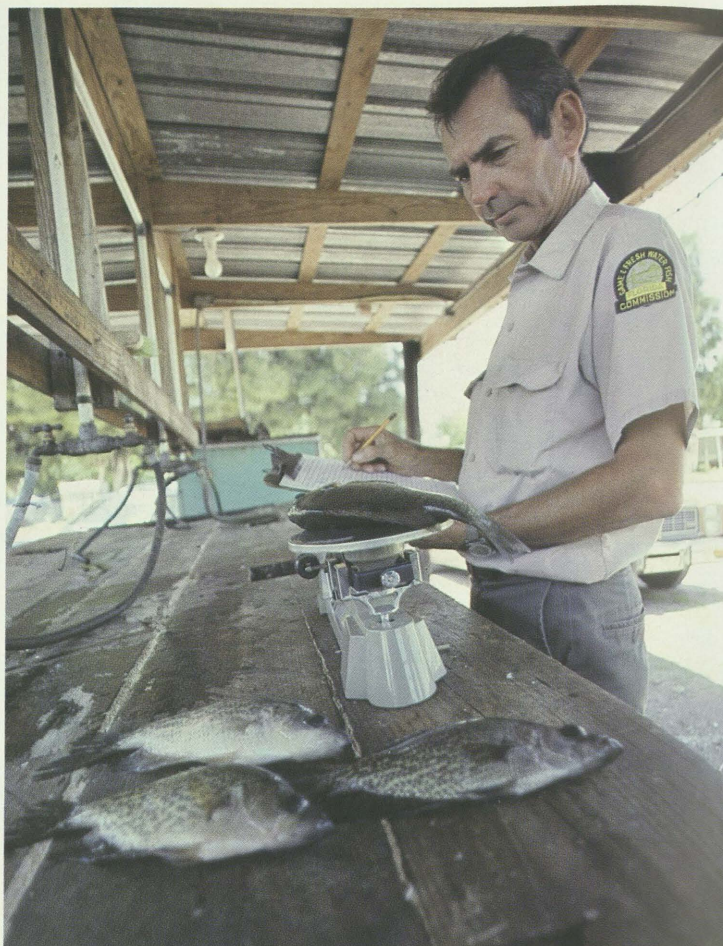
The reason for Lake Okeechobee's overcrowded fish population can be traced to the condition of the lake itself.

Since the turn of the century, the landscape of the lake region has been altered drastically.

The great marshes which bordered the lake have been drained and converted to agriculture. Cities now sprawl across the drainage basin of the Kissimmee River, the lake's major feeder stream. The river itself has been shortened and the waste water of the towns and ranches of the Kissimmee Basin is now sped directly into the lake.

From the south, the lake receives runoff from several hundred thousand acres of muck farms which is backpumped into the lake to be stored for use during the dry season. This water is polluted with fertilizers and pesticides as well as organic matter of the muck soil itself.

In the jargon of scientists, the lake has become "culturally enriched." It is being over-fertilized by great amounts of phosphorus, nitrogen and other



organic material in the waste water and has begun to noticeably affect gamefish populations.

As nutrients accumulate at an increasing rate, the plant life of the lake responds accordingly. When heavily fertilized, the plant community increases rapidly. If conditions worsen, algal blooms are apt to occur which can result in reduced dissolved oxygen and even fish kills in extreme situations.

Unfortunately, gamefish usually require more dissolved oxygen than most rough fish such as gar and mudfish and are the most severely affected by conditions causing a fish kill.

Even when a fish kill doesn't occur, the increased plant growth favors a corresponding increase in forage fish such as gizzard shad which crowd gamefish out of the better feeding and cover areas.

The Game and Fresh Water Fish Commission research program has found early symptoms of these conditions in Lake Okeechobee. The sport fishery may be affected over the next few years if the trend continues without intensive management.

One of the only management tools for use on Lake Okeechobee with any real hope for success is the large-scale removal of fish. This can best be accomplished by commercial fishing methods such as trawls and haul seines.

A year ago, a trial commercial seining program

was authorized by the Legislature. The program was set up to be continually monitored and to be closed or suspended if evidence indicated damage to Lake Okeechobee's sport fishery.

The program attempts to accomplish three major goals: (1) To utilize an economic resource which has traditionally been wasted; (2) To remove a portion of the excess nutrients trapped in the lake; and, (3) To prevent deterioration of sport fishing in Lake Okeechobee.

A decline of Okeechobee's sport fishing would be a symptom of a greater problem—the overenrichment and subsequent deterioration in the quality of the lake's water.

While commercial harvest of fish should not be considered as a solution for the water quality problem, it is a step in the right direction.

It is estimated that removal of 10 million pounds of fish would eliminate about four percent of the phosphorus and about 10 percent of the nitrogen annually trapped in Lake Okeechobee.

Each organism in the lake, from the lowliest alga to the biggest bass, consumes and stores nutrients such as phosphorus and nitrogen. If it dies in the lake, its stored nutrients remain in the system. If it is caught and removed or eaten by something which is caught and removed, the nutrients stored in its body are also removed.

Sport fishermen harvest only about 400,000

pounds of fish from Lake Okeechobee each year and, before haul seines and trawls were legalized, the commercial catfish take was less than two million pounds.

Yet, according to proven fish management practices, we should be annually harvesting half the total pounds of fish which the lake supports, or about 22 million pounds.

The market value of this amount of fish is in the millions of dollars. The resource is there, largely untapped, and it's a *renewable* resource.

As a measure of protection for the sportsman, the Commission has established regulations prohibiting the taking of largemouth bass and pickerel by commercial fishing methods as well as the sale of those fish. Additionally, areas have been set aside within the lake which are closed to trawlers and haul seines.

To see that regulations are understood as well as enforced, wildlife officers patrol the lake and check the various wholesale fish houses in the area.

As an additional safeguard, gamefish taken by commercial fishing methods are individually tagged with one-time use metal tags which are distributed by the Commission. While the cost of these tags is low enough to be negligible to the fish dealer, it provides necessary revenue for the funding of the commercial seining program and helps to pay for continued research on Lake Okeechobee. ●

Photos by William Greer



Vernon Ogilvie (facing page), a Game and Fresh Water Fish Commission fishery biologist assigned to the Lake Okeechobee research project, "works up" part of the day's sample. At left, a Lake Okeechobee fly fisherman who's pleased with afternoon's catch of bass.

Next to his mate, man's most prized possession down through the ages has probably been a knife of some sort. It is estimated that 90 percent of American males own or carry a knife of some kind. In this state hundreds of sportsmen proudly wear a belt knife that was born in Florida nearly 40 years ago—probably the first quality handmade knife to appear in modern times. It has since become world famous.

Inside an unpretentious backyard workshop, hidden inside a sprawling citrus grove within the city limits of Orlando, gentle-mannered W. D. ("Bo") Randall, Jr. and a small staff of dedicated assistants fashion by hand the famed Randall sporting and fighting knives.

Into the Randall shop and knife museum walk astronauts, Alaskan big game guides, soldiers of fortune and many other men to make "knife talk" with Randall and his son, Gary, the shop manager.

They place orders—knowing it may take nearly two years to fill such orders.

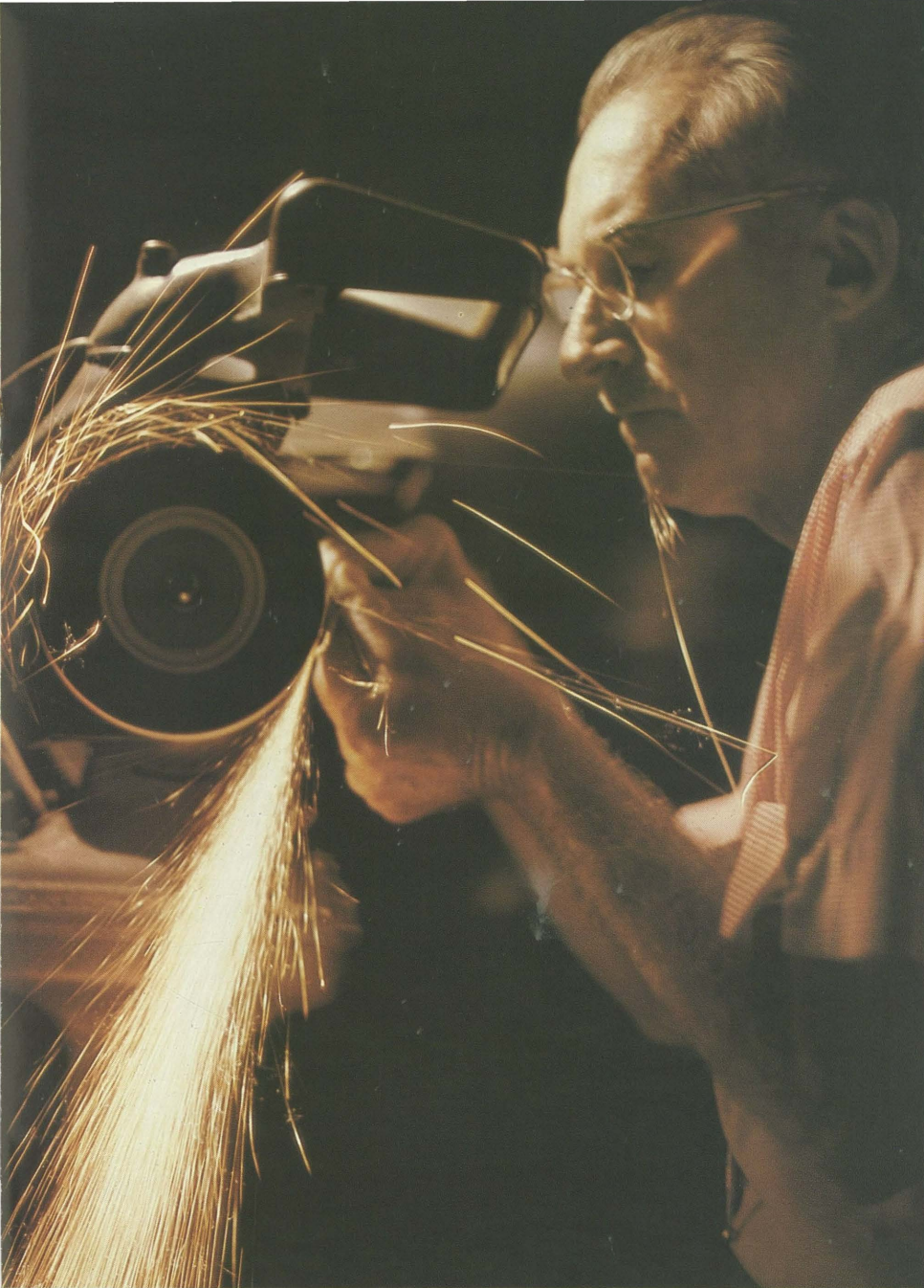
Grateful letters sent Bo Randall by some 25,000 satisfied customers scattered from Iwo to Italy, from Arctic tundras to African jungles, speak glowingly of the superb knives. Rugged outdoorsmen tell reverently how the gleaming blades never fail . . . how they retain a wonderfully sharp edge even when used inadvertently to lop off the heads of big nails, or perhaps to skin out three huge brown bears in one day. (This writer has hunted with the veteran Alaska big game guide who reported this feat. The man added: "I know of no other knife that could have done such a job.")

Randall knives have been used for such things as cutting quickly through a 6-inch manila mooring rope—to free a ship in an emergency. Or to pry open the canopy of a downed fighter plane—after which the blade was still so sharp the rescuing

"We have never heard of a dissatisfied buyer"

The RANDALL KNIFE





Examples of Randall steelcrafted knives are seen, far left. Famed knifemaker Bo Randall grinds down blade in the photo at near left.

Photos by George X. Sand

medical corpsman could operate immediately to save the injured pilot's life.

Bo Randall once made a knife to order for a college student who yearned to kill a bear single-handed, like Davy Crockett. And he made another for a Texan who wished to brag that he owned the world's largest Bowie. (It weighed 8 pounds!). U-2 pilot Francis G. Powers was carrying one of the sought after blades when he was shot down over Russia in 1960.

During World War II, Major Bong, the famed American ace, paid the equivalent of \$500 for a used Randall fighting knife. And about that time,

By George X. Sand —

Maj. Ralph K. Halterman, 8th U.S. Infantry, sent Bo this unsolicited testimonial: "I spent three years in the South Pacific as a jungle fighter. On New Georgia, I bought a Randall knife from a Marine pilot who was being sent home as a casualty. The blade was a work of art and accounted for a large percentage of the 364 enemy I received credit for killing with individual arms."

Bo Randall made his first knife in 1938, after watching a careless fellow outdoorsman abuse a fine belt knife in a camp in the Michigan woods. The wealthy Florida citrus grower had never owned a fine knife himself, and wondered if he could make one. He did. But, being a perfectionist, it took him six months.

A friend fell in love with the beautiful blade. He managed to talk Randall out of his creation. So Bo made another . . . and another.

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Soon strange tales spread across the United States. A super-knife was being handcrafted in the Deep South. Stores like Abercrombie & Fitch and Marshall Field of Chicago tried to place orders. Randall refused. He explained that he couldn't mass-produce the incredible blades.

A Midwest farmer wrote: "We butchered a three-quarter grown bull last week. After cutting, chopping, hacking and skinning through a lot of muscle and tough tendons, your knife was still able to shave the hairs from my arms—dry."

Bo's fame continued to spread. An Icelander from Reykjavik wanted him to design a short blade suitable for safe carrying while skiing. A troop of Canadian mounties expressed their praise for his product. And an American traveling in Israel reported meeting a Circassian tribesman who proudly wore a Randall that he'd picked up in southern Russia.

Bo, meanwhile, modestly refused to echo the claim of such happy users that he was making the world's finest knife. (Even today he won't claim this. "We continue to strive for such recognition, but there's no way of proving it.")

It took World War II to convince Bo he should hire and train some assistants. Late one night he was working alone in the flower-grown smithy in his backyard when there came a knock on the shop door. A young soldier named Zacharias, stationed in a training camp in the pine woods near Orlando, had gotten a weekend pass to visit Bo and make an earnest plea.

"I want you to make me a fighting knife," the husky boy told Randall seriously. "They'll be shipping me out soon—and I have a feeling I'll be needing a knife to defend myself."

"I wouldn't know how to begin," Bo told him truthfully. "All I've ever made are hunting blades."

The man and the boy sat there talking, long after midnight. Zacharias had heard the legend of Col. James Bowie and his famous "knife that cut twice"—first on the downward slash, then from the opposite side of the blade as it was snapped upward, at completion of the thrust. That was what he wanted. But Bo had to tell him that the two pound fighting blade of the 1830's would prove too cumbersome. Something lighter, faster, would be needed for foxhole combat . . .

"That night Zacharias and I designed the knife that U.S. combat troops would make famous throughout the world—although I was unaware of this at the time," Bo recalls.

Today the famous "Randall made" insignia is stamped upon more than 30 different models. These are used by hunters, fishermen, campers, divers, knife throwers, soldiers of fortune, and others. Each is handmade. No two are exactly alike. The blades cost from \$20 (throwing knife) to \$100, and more. Hunting knives average about \$40.

Randall has yet to have a knife returned by a dissatisfied customer, this in spite of a refund pledge which the American Gunsmiths Guild once called, "A guarantee that no one else dares give." ("I guarantee that you will agree, on seeing the knife you order, that it is the finest you have ever seen at any price. And I make no hesitation in saying I will be glad to refund the purchase price, if you think otherwise and return the knife in new condition.")

Unlike many of his competitors, Randall makes no secret of how he builds a knife. Here are his step-by-step suggestions, should you wish to make a belt blade of your own:

1. Obtain a piece of carbon tool steel knife stock.
2. Heat it cherry red and hammer out the rough blade in the general shape desired.
3. Grind the rough forged blade to the size and shape of the blade desired.
4. Harden the blade by heating it cherry red and then immersing it in tempering oil. Draw out the brittleness and internal stresses by tempering the blade at low heat until it becomes a straw blue color and can be cut with a new file.
5. Grind in lines, bevels and contours and remove roughness.
6. Use a coarse hone and true up the cutting edge, removing any remaining waves and unevenness.
7. Regrind the blade on a fine grit wheel to remove scratches made by the coarse hone.
8. Smooth the blade, first with coarse and then with fine grit emery cloth.
9. Polish the blade on a glued-up, coarse emery wheel.
10. Cut and shape the hilt from one-quarter inch brass. Drill a hole and file it to rectangular shape to fit the handle tang. Fit hilt to the blade and solder in place.
11. Fit the handle to the tang, cutting rectangular holes in pieces of fiber, plastic or leather. Slip into place and glue each separately. Drill a piece of one-half inch Duralumin for the butt and recess it to fit the tang. Drive it on tightly and peen it into place, or thread end of tang and use a nut. When the glue is thoroughly dry, roughly shape the handle with a coarse file. Finish shaping with a finer file. Then smooth it, first with coarse and then fine emery paper. The hilt and butt are filed and sanded as the handle is shaped.
12. Polish the blade with a medium grit glued-up emery wheel. Polish the hilt and butt on a muslin wheel charged with polishing compound.
13. Sharpen the blade on a medium grit hone. Always use special honing oil for all honing.
14. Polish the blade on a fine grit glued-up emery wheel and again polish the hilt and butt.
15. Give a final sharpening to the blade, using a fine grit hone.
16. For final polishing of the blade, use a hard

polishing wheel to remove the last fine hone scratches. Give a final polish to the hilt and butt and the final polish to the handle with a soft muslin wheel.

17. Make or have made a sheath patterned to fit the blade with a stop for the hilt so the point cannot pierce the sheath and with splines along the sides to prevent cutting of the stitches. Use a keeper strap and fasteners to hold the knife in the sheath.

Caution: Grinding Nos. 3 and 5 requires great skill in getting the lines and bevels of the blade

true by eye. These are dangerous operations, also, requiring good goggles to prevent slivers of steel from getting into the eyes. The grinding dust is unpleasant, so use a blower, if possible. In all grinding and tempering, never overheat the blade.

Muslin wheel polishing of the hilt, butt and handles and the final polishing of the sharp blade are also dangerous operations. These wheels can easily snatch the blade from one's grasp and cause it to fly through the air.

For the cost of mailing (25 cents) Bo will send you his catalog which contains these knife-making, and other, instructions (proper way to sharpen a blade, and so forth). His address is P.O. Box 1988, Orlando, Florida, 32809.

"The knife making began as a hobby—and still is," he says. "Were I obliged to depend upon it for a living I would have had to give it up long ago . . . since each blade requires many hours of hand labor. Meanwhile, it does provide a living for ten full-time employees, about half of whom are war veterans."

Leafing through the thousands of letters in Bo's correspondence file can be quite an experience. (Incidentally, he answers nearly all in longhand.) Judge Roy S. Tinney, secretary of the American Academy of Arms and a world-recognized knife authority, told Randall: "You are making knives destined to become family heirlooms. I implore you: never let mounting orders tempt you to lower the quality."

Mrs. Harold L. Ickes presented her husband with a fine Randall blade. The first knife in Space was a Randall. (Bo had made a special, multi-purpose, blade for each of the seven original astronauts—each to his own design—blades for which he refused payment. Astronaut Gordon Cooper returned his knife to Bo, after carrying it with him through the historic 23 orbits. This knife is now on display in the Randall museum, for which there is no charge to visit.)

A worried Detroit barkeeper placed an order that included the terse explanation: "I'm not a hoodlum . . . I want this knife because a woman comes in here who has already cut up four of my customers."

An Air Force lieutenant writes from Alaska: "Of all the brands of knives used by 60 men in an Air Force Arctic Circle survival school, yours was the only one that held up."

A mother reports that the knife she purchased for her husband years ago is still so highly prized that he has actually designated in his will which of their sons shall inherit it. And an employee of the U.S. Embassy in Italy asked that his Randall be mailed in a plain wrapper box, " . . . since over here many think of knives in terms of midnight stabbings."

The most pointed letter of all, perhaps, came from an old Northwoods trapper who said simply: "I'll be a fleabitten coon if this ain't the best damn knife ever made!" ●

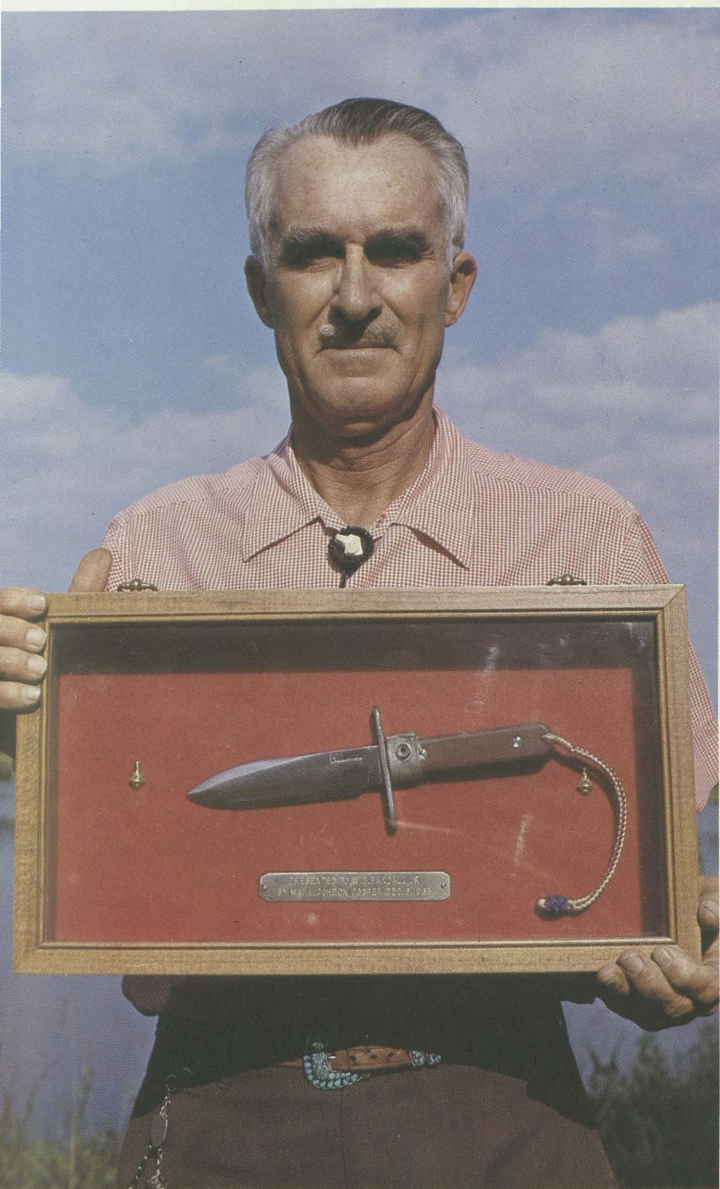


Photo by George X. Sand

Bo Randall with one of the blades he made for the seven original Astronauts. This one was returned to him by Astronaut Gordon Cooper, in appreciation, and for placement in the Randall knife museum, which is open to the public, free of charge.

A Place To Hunt Doves

The average family moves once every five years. There's a problem in finding new schools and locating a family doctor. Even worse, you have to find new places to hunt!

It's not easy for urban and suburban hunters to meet and get to know farmers. Yet most of the dove shooting is on private land—either farms or ranches.

Traditionally in the Southeast, most dove hunting is a social way of shooting, involving from 10 to 50 gunners. The number of hunters invited to participate usually depends on the size of the field and how large the concentration of mourning doves.

If you're not a good friend of a farmer, or friend of a friend of the farmer, you don't get invited to the big shoots. And you sure can't get up your own crowd of 10 or 20 hunters and descend on some rancher and expect to get permission to hunt.

These days it takes a quarter of a million dollars to be a one-horse farmer and a farmer can get himself obligated for a million dollars with a medium-sized operation. He may be willing to lease shooting rights to a group of hunters. If he does, chances are he knows some of them well. He's probably not interested in charging a daily fee for shooting. The dollars he might take in don't mean much when compared with his investment.

Farmers know that shooting privileges are a premium item. Many put on dove shoots to pay off their social obligations in the community. They invite bankers to keep them from calling in the mortgage. They invite doctors to improve their chances of getting medical attention. They invite preachers to salve their feelings of guilt for not showing often enough at services and with the hope they'll make a few points towards a heavenly journey.

Photo by Charles Dickey





Photo by Wallace Hughes

When you come right down to it, there's not a lot the average urban hunter can do in return for permission to hunt. Gaining access to farms is more than a negative factor of agreeing to close gates and not to shoot cows. In the long run, the best bet of the suburban hunters is to somehow develop a sincere friendship with farmers.

This is not an article on human relationships. Most farmers are friendly people. In some manner, the dove hunter wanting a place to hunt must develop their friendship. In my experience, two hun-

ters are more likely to get permission than a dozen or so.

Southern hunters have been spoiled by having too many doves in the past. To many, it's not a dove shoot unless the field is saturated with gunners and flooded with doves. If they are not covered up with doves, the shoot is not a success.

(continued on next page)

By Charles Dickey

Many dove hunters find it more enjoyable to hunt with a good retriever such as a Labrador (facing page); it saves a little leg work and helps prevent lost birds in brushy country. The mourning dove (left) is one of Florida's most popular and abundant gamebirds.

(continued from preceding page)

I think this attitude is a mistake and one which will have to be changed, at least as far as the average hunter is concerned. Please allow me to say that I am not opposed to the large social shoots. I have never turned down an invitation to one and never will as long as my sanity is working.

Most of the dove shooting I enjoy in a season is by myself or with one or two other gunners. I actually enjoy this type of hunting more than the shooting at a large social bang-out. Where a field is inundated with doves, even if I shoot horribly I still get my limit of 12 birds in an hour. On lucky days, I may be through in 20 or 30 minutes. What's the hurry? I don't know. That's the way social shoots are conducted.

The social shoots are exactly that! Shoots. There is no hunting, except for a place to put your shooting stool and another box of shells.

With hunting there can be a quality experience whether you pull the trigger or not. This is not true of social shootouts. At these, if the birds don't come, the shoot is a failure. The gunner who first gets a limit is a hero. The gunner who bags only 10 doves, rather than a limit of 12, is a failure and has lost his manhood.

I've been on a lot of social dove shoots. No one has ever asked me if I had a pleasant afternoon. They always say, "Did you get your limit?" or "How long did it take you to get your limit?"

I like the dove hunts by myself or with another hunter because it is easier to get permission from a farmer. More importantly, I actually hunt for the birds, putter about for three or four hours and delight in being outdoors. I enjoy a quality experience for me. I am pleased if I bag 10 doves or a limit in an afternoon. I hope I see a lot of doves and get many chances to fire my shotgun. But the number of doves I take home or the times I pull the trigger has little to do with the pleasure of the afternoon. I've had some memorable afternoons when I shot two or three doves, or none!

Depending on how warm it is, I like to start rambling for doves about 2:00 or 3:00 p.m. The hunts are more enjoyable if there's a retriever along, such as a Labrador, or a pointing breed which will fetch doves such as a setter, Brittany or pointer.

At this time of afternoon, I know the doves are not moving much. Mostly they are sitting in trees preening and loafing and resting. But perhaps the dog will flush one from the edge of a cornfield and I will get a quick jump shot. Perhaps a dove changing from one woods to another will offer a fast passing shot. As I amble along a sandy road, perhaps two or three doves will dart in trying to dust or pick up grit.

As there are more signs of dove movement about 4:00 p.m., with the first forays and scouts for feeding fields, I try to pick up a flight line or pattern. It's not always easy. At times, the doves themselves don't seem to know what they're doing. More likely, they know what they're doing but I can't figure it out.

If I can pick up a direction, I try to move under a flight line and hide in a fencerow or some handy cover. Perhaps there is a solitary walnut or pecan tree that passing doves land in to look over the scenery. If so, I may wait near it for awhile. If the doves come, I get some shooting. If they don't, after a bit I move on.

I usually carry a string of four to eight dove decoys. I have never had much luck in doves peeling off and landing amongst them as scaup, ringnecks or redheads do with a set of blocks (sometimes). Actually, I'm not concerned with the doves trying to light in the same low tree with the decoys. I just hope that the doves swerve for a look and thus come within range of my shotgun.

I've had better luck with decoys around watering ponds late in the afternoon than any other locations. As the doves circle looking for a bare landing spot, they get a good look at the decoys. They may take a swing by them. At times, I am sure the doves swing because they want to go in that direction and the decoys have nothing to do with it. Even so, I feel the decoys are worthwhile. If the birds are looking at them, they're not as likely to see me.

By 5:00 on a strolling afternoon, if I am lucky, I may find a field that doves are feeding in. If there's a convenient low, bare tree, I may quickly put up the decoys. Sometimes I do not bother. With only one or two hunters, you have to stay portable. When the shooting starts, the doves may change their flight lines and it's necessary for the hunters to keep adjusting their positions.

There's usually a pattern in the way doves enter and leave a field. With only a couple of hunters, the pattern may not be interrupted much. It's important to note the direction most of the birds take when departing a field. In fact, all afternoon you watch for main directions and look for possible watering spots and roosting areas.

Late in the afternoon, I like to move to a small pond and wait. After the doves feed, they usually stop some place for a drink before flying to roosting trees. It's important that I watch the direction of doves leaving the pond. It may not be far to their roost.

Sometimes I find a water hole which a lot of doves are using and the shooting is fast and furious, perhaps the only shooting I have had all afternoon. One advantage of only a couple of hunters



Photo by Charles Dickey

Hunting with one or two hunters is apt to be a quality experience whether you pull the trigger or not.

a large concentration there but I don't need a lot of birds at one time. A few dribbling in is sufficient. Of course, it was not the same flock of doves all season. Local doves, or doves reared in the area, may move out in September or October and be replaced by other migrants. There are population shifts throughout the tri-split season. But however the doves migrate about, if you don't burn out a spot, the chances are that you can go back time after time.

Twenty or 30 minutes before the close of shooting hours, I try to move quickly to a potential roosting area. If I have been perceptive, perhaps I have made a good guess. The number of doves roosting together varies greatly. Sometimes it's only a dozen or so and at other times they pour into a clump of live oaks by the hundreds. They also use water oaks and quite often coniferous trees, such as pines and cedars.

Regardless of the size of a roosting area, I try never to get under the roosting trees and shoot. The birds may not come back again. I like to find a shooting spot on an approach flyway 50 yards or so from the roost. It can provide some wild pass shooting in the dwindling light. The doves which get by my gun, and sometimes that is all of them, are not bothered at the roost.

A dog which will find and fetch doves really pays off in the few legal minutes of shooting you get on a flight line to a roost. There may be a flurry of shooting for only three or four minutes, maybe the first shooting of the afternoon. If you have a dog to take care of dead or crippled birds, you can concentrate on the shooting.

On my afternoons of puttering, I do not get shooting at all the stops and locations. But somewhere along the line, I usually find a few birds. Perhaps I walk a mile or two, not much exercise but more like a pleasant stroll with dog, companion and gun. There's no way I can lose on this sort of leisurely hunting. Regardless of the number of birds in my bag, I have a successful hunt.

Incidentally, some of the wildlife management areas provide dove hunting opportunities. By the latter part of the dove season, parts of Cecil Webb WMA are usually burned and this attracts birds. The Commission's food plots on several other management areas pull in fair numbers of doves at times, and there are special dove fields managed by the Commission in various locales. Check with regional headquarters and they can give you some up-to-date tips on what the doves are doing. ●

working a feeding field, pond or roost is that they are not as likely to "burn it out" as a large group of 15 or 20 gunners.

Doves may put up with light shooting pressure without changing their feeding, water and roosting patterns and locations. But under sudden heavy pressure from a lot of shooters, they may leave the entire area.

If I can pick up a flight line 50 or 100 yards away from a watering pond, I try to get under it and stay away from the water. I take passing shots as the doves zip by. They are free to go ahead and water without my disruptive shotgun. I'm hoping that when I come around two or three days later, the doves will still be using the same watering pond.

Four years ago, I worked the same small pond all season and always got some shooting. I never found



Photo by Wallace Hughes

WHITE-TAIL

The old buck snaps awake; some sound, some faint warning of danger breaking into his late afternoon nap. Lying concealed in a dense clump of gallberries, only his ears move, searching, trying to identify the alarm.

Cautiously he lifts his head, nostrils flaring, sampling the breeze for danger. Only the faint scent of woodsmoke taints the familiar smells of the piney woods.

He hears nothing unusual: a grey squirrel barking in the river swamp below, the October wind in the pines. A crow calls in the distance.

Appetite getting the best of his caution, the buck gets to his feet, rump first, on joints stiffened with age. Again he waits, senses searching for danger signs. Reassured, he scratches his ear with a hind foot then moves down the ridge toward the swamp.

Feeling the excitement of the rut, he picks a fight with a sparkleberry bush. Brow lowered and legs straining, he rushes at the bush, gouging and shaking with his antlers. After a moment, the scrap subsides into a methodical antler polishing. Though not as large as in younger years, the antlers are still good. The heavy beams and long tines shine in the late sunlight.

Peaceful now, he licks the sap oozing from the newly inflicted wounds in the bush. Then, with one last thrust against the resisting sparkleberry and a quick sideways bound, the battle is over. Stifflegged, he trots the final distance to the swamp, sinking to the dewclaws in the bottomland mud.

The still surface of a pool, mirroring the frost-reddened tupelo and cypress, is broken as he wades in to drink. The ripples of his passage cast undulating waves of light on the tree trunks, startling him with their movement. Head up, alert; water drips from his muzzle making tiny bell-like sounds in the evening quiet. Another sip and he moves on to feed.

The swamp floor is broken by mounds and gullies, deposited and eroded by the river at flood stage. Irregular terrain, seasonal floods and rich soil spark the growth of dozens of kinds of trees and shrubs—many good for a meal. Climbing a low hammock, he noses among newly fallen leaves for acorns. Although the buck shares the acorns of the floodplain with other deer and game animals, he still finds plenty to eat. His coat is sleek and full and a layer of muscle and fat covers his ribs and hips. In good shape, he'll have little trouble in the lean months ahead. Unless a hunter's bullet finds him, he'll most likely survive the winter and maybe several more to come.

But eventually he will die here among the bottomland hardwoods and the hillside pines. It doesn't matter how. It's of no great importance whether his bones whiten among the gallberries or if his rack adorns a paneled wall.

In time, he'll be back; a spotted fawn grown into another antler-polishing buck. Fighting the same bushes, eating the same acorns, he will be here as long as the swamp and the hillside remain. —*Michael Miller*

If You See A Panther

By Chris Belden

The panther is the most endangered of Florida's animals. It may well be teetering on the very verge of extinction. The Florida Game and Fresh Water Fish Commission hopes to head off such a disaster.

The decline of the Florida panther has been under way at least since the arrival of white man. Like other large carnivorous animals, the species cannot live in dense concentrations. It takes an enormous area to support each individual. Therefore, when only one or two of the animals are killed, the panther population over many square miles is eliminated. This elimination process started with the early settlers in Florida who attempted to destroy panthers at every opportunity because of losses of livestock and imagined fears for their lives.

As early as 1832, even before Florida became a

state, a law was passed which permitted a panther bounty to be paid by the county courts. Under this rule, the local courts decided on the amount to be paid. An 1887 law authorized a statewide \$5.00 bounty for panther scalps. The panthers which survived this persecution were probably those which showed the greatest fear of man and the greatest reluctance to appear in open areas. Then, when deer were nearly eradicated in lower Florida in the 1930's to control the fever tick, panthers strayed from the relative safety of their normal haunts in search of prey. This resulted in more hunting pressure by ranchers and almost lead to the final doom of the animal.

Partial protection was given to the now rare panther in 1950. At this time, panthers could still be hunted only during the open season for deer,
(continued on next page)

The Florida panther, this state's most endangered animal, may be teetering on the brink of extinction.

Photo by Chris Belden



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and animals that were found destroying livestock could be taken by special permit at any time. In 1958, the panther was removed from the native-game animal list and given complete legal protection by the Florida Game and Fresh Water Fish Commission.

Since then, even with panthers legally protected from deliberate killing, human commercial developments and long term economic projects have continually encroached upon the diminishing critical panther habitat. At the present time, it is not known whether or where a viable or reproducing population of panthers still occurs in Florida. A few indisputable records of the species exist, but they are mostly of dead animals and altogether do not reveal a particular population that might be in any way feasible to manage.

If the Florida panther is to be saved from extinction, the first step is to find a viable popula-

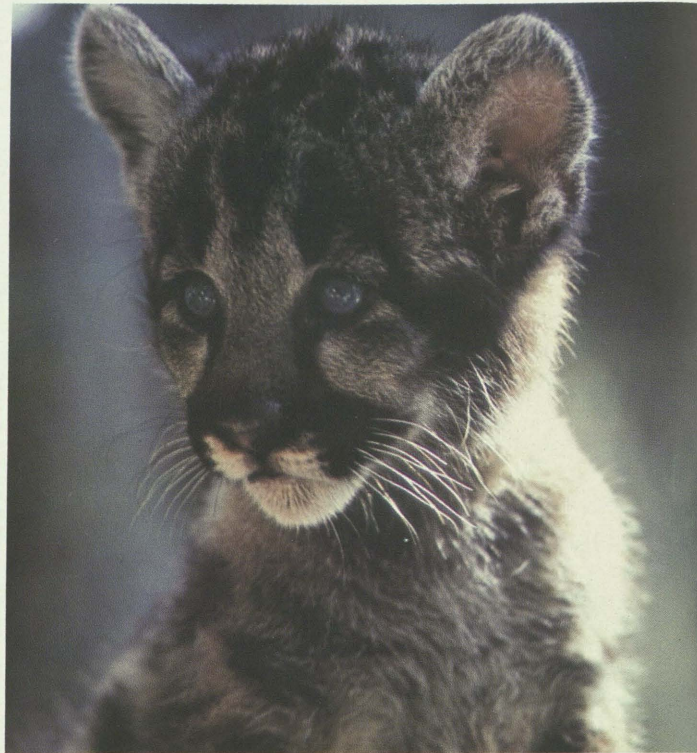


Photo by Steve Nesbitt



Photo by Chris Belden

Adult panthers (lower left, upper right) are large, tawny, long tailed cats. Kittens (upper left) are yellowish-brown with darker spots and blue eyes. The tracks (lower right) are four-toed, round, and do not show claw marks. The coin in photograph indicates size.

Photo by Leonard Lee Rue III



Photo by James Brady

tion. The next step, if a viable population is found, is to determine the critical habitat necessary for the continued survival of that population. The Florida Game and Fresh Water Fish Commission has recently begun an investigation in an attempt to locate any extant panther population that can be protected and managed. This is being done by the Florida Panther Record Clearinghouse at the Commission's Wildlife Research Laboratory in Gainesville and by systematic field searches for panther sign in areas most likely to contain panthers based on presently available information.

If you see a panther or its sign, you should do your best to collect some tangible evidence of the animal's presence. This can best be done by photographing the animal itself or its sign (tracks, scrapes, kills, etc.), by making plaster-of-Paris casts

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of the tracks and by collecting scats. If possible, measure the length and width of individual tracks and the animal's stride according to the illustrated directions. Other important information to include would be the observer's name, address and telephone number; date and time of sighting; detailed location; description of terrain; and an account of the observation. Remember, it is far better to include too much information than too little. When photographing tracks, include some standard-sized object in the photograph, such as a coin.

Mail the information to:

**Florida Panther Record Clearinghouse
Game and Fresh Water Fish Commission
4005 South Main Street
Gainesville, Florida 32601**

Although there is a great deal of variation in color, the Florida panther is usually a uniform rusty or tawny cinnamon-buff color (deer-colored) on the back and whitish underneath. The tip of the tail, back of the ears, and sides of the nose are dark brown or blackish. Panther kittens are yellowish-brown with dark brown or blackish bands around the tail until they are approximately six months of age and have blue eyes. Although many people in Florida have the misconception that panthers are black, there has never been any conclusive evidence to prove that there has ever been a black panther in Florida.

The track of a panther consists of four toe marks in a semi-circle ahead of the imprint of a ball pad. The claws are encased in a sheath and do not show in a normal track. The heel pad usually shows three lobes in the back. When walking, the hind foot is often placed in the imprint made by the forepaw. The smallest track of a free-ranging panther is 2¾ inches which is larger than even the largest bobcat track. Panther tracks can be differentiated from tracks made by dogs by the claw marks in dog tracks, and in many instances the imprints of the hind feet of dogs overstep the imprints of the forefeet. The heel pad of dogs generally only shows two lobes in the back. Bears and otters have five toes.

Other less easily identifiable evidence that indicates the presence of a panther are scrapes, sounds, and kills. Scrapes are made by panthers pushing up a small mound of dirt and debris with very short backward raking motions with the hind feet. These six-inch-long scrapes are usually back up against some object such as a palmetto bush, fallen log, etc. The mound of debris pushed up by the scrape is urinated or defecated upon and, it is thought that since panthers are mainly solitary animals, these scrapes act as markers for panthers to keep up with other panthers in the area. This is probably particularly useful during the breeding season.

Adult panthers are usually silent, but they are capable of most of the gradations and tones of the domestic cat, only much louder. These sounds include purring, mewing, caterwauling, and spitting notes. The caterwauling is reputed to sound like a woman screaming.

The principle foods of the Florida panther are white-tailed deer, wild hogs and raccoons. They will, however, take almost any other prey of suitable size. If the prey is a deer, the killing bite will be on the back of the neck or the base of the skull—the canine tooth holes will be two inches apart. The bobcat, lacking the jaw power and weight for the neck bite and head twist, attacks by leaping on the animal and riding it while biting into the throat to suffocate it or sever the jugular vein. A bobcat's canine teeth are only one inch apart at most. Dogs attack the flanks and rear and do not attack the throat until the deer is down. Great care is necessary in diagnosing kills to distinguish between the marks left on the carcass by the primary predator and those left by scavengers. To be positive that any clues left on the prey were made by the primary predator, it is almost necessary to beat the scavengers to it, which is pretty hard to do in Florida.

If you are one of those people lucky enough to see a Florida panther or its sign, you'll always have a good story to tell your grandchildren. But if you can provide the information we've requested, you might have an even better story to tell.

You might be able to look back with pride some day and say, "I helped save the Florida panther from extinction." ●

When walking, the Panther's hind foot is often placed in the imprint made by the forepaw.

Photo by Leonard Lee Rue III



HUNTING SEASON INFORMATION

1977-78

Mourning Dove

Three phases: October 1 through October 30
November 12 through November 27
December 17 through January 9

*During the October 1 through October 30 phase, in the Northwest Region, that portion of Franklin County lying east and south of U.S. Highway 98, including Alligator Point, will be closed to dove hunting.

Shooting Hours: From 12-noon to sunset

Bag Limits: Daily Limit 12, Possession 24

Snipe

Season: November 12 through February 26

Shooting Hours: One-half hour before sunrise to sunset

Bag Limits: Daily Limit 8, Possession Limit 16

Woodcock

Season: December 17 through February 19

Shooting Hours: One-half hour before sunrise to sunset

Bag Limits: Daily Limit 5, Possession Limit 10

Marsh Hen (Rails) and Common Gallinule

Season: September 1 through November 9

Shooting Hours: One-half hour before sunrise to sunset

Bag Limits: Clapper & King Rails—Daily Limit 15, Possession Limit 30 (singly or in aggregate)
Sora & Virginia Rails—Daily Limit 25, Possession Limit 25 (singly or in aggregate)
Common Gallinule—Daily Limit 15, Possession Limit 30

LICENSE AND PERMIT FEES

Resident:

Series AK—Statewide Hunting-Fishing	
Combination	\$10.50
Series K—Statewide Hunting	7.50
Series I—Home County	2.00
Series J—Other than Home County	4.50

Nonresident:

Series L—Statewide Annual	50.50
Series M—Statewide, 10-Day Continuous	15.50

Resident Senior Citizens Certificate No Charge

Wildlife Management Area Permit

Series RS(Regular)	10.00
Series AB(Underage)	2.50

Archery Season Permit 5.00

Recreational Permit:

State, 3-Day Continuous, required in lieu of Wildlife Management Area Permits for entry onto specified management areas for nonhunting purposes	2.00
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Hunting on Licensed Private Hunting Preserves:

Series H(Resident or Nonresident)	5.50
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Guide (Required for guiding hunting parties):

Series Y	10.00
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Alien Hunting 50.00

Waterfowl—Ducks and Coots

Seasons: November 23 through December 4
and December 14 through January 20

Shooting Hours: From 12-noon to sunset on opening days; one-half hour before sunrise to sunset thereafter

The Daily Bag Limit of ducks and mergansers is from one to ten, singly or in the aggregate, depending on the species and sexes taken. The daily limit is reached when the point value of the last bird taken, when added to the sum of the point values of the other birds already taken that day, reaches or exceeds 100 points.

Point values are assigned as follows:

- 100 points—fulvous tree ducks and canvasback
- 70 points—redhead, hen mallard, black duck, Florida duck, wood duck and hooded merganser
- 25 points—drake mallard, ring-necked duck, ruddy duck, bufflehead, golden eye and widgeon
- 10 points—pintail, scaup, blue-winged and green-winged teal, gadwall, shoveler, American and red-breasted mergansers, and all sea ducks

All other species and sexes of ducks count 25 points each.

The possession limit of ducks and mergansers is two legal daily bag limits. Coots have no assigned point value; daily limit 15, possession limit 30.

There will be no hunting of brant or geese in 1977-78.

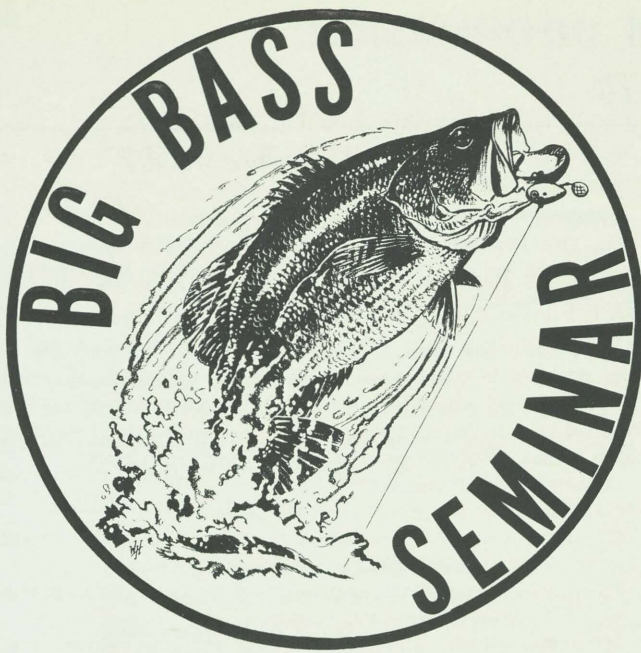
Steel Shot—In that portion of Brevard County east of I-95, Leon County (exclusive of Lake Talquin and the Ochlockonee River) and Lake Miccosukee in Leon and Jefferson Counties, steel shot must be used when hunting waterfowl with a 12-gauge shotgun. Lead shot may be used in all areas in shotguns of legal gauge either smaller or larger than 12 gauge.

Leon County and Lake Miccosukee in Leon and Jefferson Counties—Waterfowl hunting permitted on Wednesdays, Saturdays, and Sundays and on November 24-25 and December 22-23. Final day of hunting for the season is January 18 on these areas. Lake Talquin in Leon and Gadsden Counties and the Ochlockonee River open to hunting every day during the regular waterfowl seasons. The use of outboard motors is prohibited on Lake Iamonia and the north portion of Lake Jackson (Carr Lake) during the waterfowl season.

Santa Rosa County—The taking of waterfowl will be permitted from one-half hour before sunrise to 12 noon (CST) only on Thursdays, Fridays, Saturdays and Sundays and 12 noon to sunset on November 23 and December 14 in all areas south of the Gulf Power transmission lines southward to the L&N Railroad trestle crossing Escambia Bay, bounded on the west by the east bank of the Escambia River and the western shore of Escambia Bay, and bounded on the east by the eastern shore of Escambia Bay.

Special scaup-only season—January 21 through January 31. Daily bag limit 5; possession limit 10. No shooting within 200 yards of any main shoreline. Hunting areas will be: All open waters of Charlotte Harbor from the Florida Power and Light power line 4 miles east of U.S. 41 bridge on the Peace River and from the El Jobean bridge (SR 766) on the Myakka River to a line running from Boca Grande Pass east through Bokeelia to the mainland. All open waters of Tampa Bay. All open waters of Sarasota Bay south to the Albee Road bridge. All open waters of Estero Bay. All open waters of Lemon Bay. All open waters of the Indian River from the Melbourne bridge (SR 516) south. All open waters of Biscayne Bay south of the Biscayne National Monument to and including Barnes Sound.

All waterfowl hunters 16 years of age and older must have a 1977-78 Federal Migratory Waterfowl Hunting Stamp before hunting waterfowl (ducks). The stamp is available from any U.S. Post Office at a cost of \$5. It is nontransferable; must bear the signature of the hunter across its face.



ORLANDO, FLORIDA • DECEMBER 2-4, 1977

A new date is scheduled to go down in the annals of bass fishing history. The first of three historical events might be viewed as June 2, 1932, the day George Perry established the world record by landing a 22-pound 4-ounce bigmouth bass in south Georgia. The second, June 6-8, 1967, marks the launching of the first bass fishing tournament by the Bass Anglers Sportsman Society at Beaver Lake in Arkansas. The third, being billed as the "grandpappy" of all bass fishing seminars and reportedly the world's largest gathering of bass anglers, will be the Big Bass Seminar, scheduled for December 2 - 4, 1977 at the Sheraton Twin Towers Hotel and Convention Center in Orlando.

For almost half a century bass fishermen have tried to top the big bass record set by George Perry. For the past decade much of the complexion of bass angling has undergone rapid and dramatic change from contemplative to competitive with the skyrocket growth of bass clubs and bass tournaments. The Big Bass Seminar, on the first weekend of December, will herald a new era of conservation concern and communication between those who use the resource (the bass angler) and those who manage the resource (the bass biologist) and hopefully create a cooperative concept for the future of bass fishing in Florida and in the nation.

The Big Bass Seminar is coordinated by the Florida Game and Fresh Water Fish Commission with the active support, cooperation and sponsorship of the Florida Federation of B.A.S.S. Chapters, the American Bass Fisherman, the National Bass Association, the United Bass Fisherman and the Poor Boy Bass Association. A non-profit educational program, any revenue generated by the Big Bass Seminar will be awarded as a grant for continuing bass research studies and bass fishing information.

Attendance at the Big Bass Seminar will be

limited to 2,500 anglers with admission tickets issued on a first-come, first-served basis and available by advance registration through the Big Bass Seminar, P. O. Box, 15602, Orlando, Florida 32808. Holders of seminar tickets will be admitted to all discussion, demonstrations, and presentations as well as the Big Bass Theater featuring bass fishing films from Florida and around the world, plus unlimited visits and tours of the Big Bass Exhibit and Display Center.

A Big Bass Banquet scheduled for Saturday, December 3, will be limited to 1,500 anglers with tickets issued on a first-come, first-served basis. General admission will be available at the seminar site and will admit anglers to the exhibit and display center and the special attractions including fishing and casting demonstrations.

The Big Bass Seminar is an opportunity for fishermen to meet and greet some of America's best bass anglers, to improve angling skills, to learn about bass and to have input and a voice in Florida's fishing future. The Seminar program includes some of the biggies of the bassin' world including seven of the nation's top professional bass tournament anglers, eight bass biologists with the Game and Fresh Water Fish Commission, one of America's top bass fishing guides, and one speaker representing the attractive angles of angling, the female fisherperson. In addition to the seminar speakers, special attention will be focused on special attractions scheduled for the exhibit center.

A visit to the Big Bass Seminar will give anglers the opportunity to preview new tackle and bass angling equipment. One hundred tackle and equipment displays will be erected around an indoor pond which will feature a tackle testing arena. FLORIDA WILDLIFE will have a display in the exhibit center, so stop by and meet the editor and staff of Florida's top outdoor and conservation publication.

The Big Bass Seminar is an unprecedented first, with a state wildlife and fish agency and organized fishing clubs joining forces for the advancement of fishing and progressive conservation communications. When bass anglers and bass biologists get together and exchange ideas, something good is bound to happen. With "Communications" being the key word for the seminar, each session and presentation will be followed by a discussion period for questions and answers and anglers registering in advance have the opportunity to submit their questions prior to the December assembly.

In summary, it might be stated that the Big Bass Seminar is designed to aid and assist bass fishermen. To establish an understanding and appreciation of the Florida black bass as America's number one game fish and to perpetuate both Florida's largemouth legacy and the art and pleasure of bass fishing. —Jim Floyd

SEMINAR SPEAKERS and SUBJECTS

FORREST WOOD

"The High Performance Bass Boat"

A discussion of the evolution of the bass boat

STEPHEN SMITH

"Black Bass Research in Florida"

A review of past, present and future bass studies

TOM MANN

"Successful Fishing with Crank Baits"

Tips, techniques and selecting a crank bait

JOE CRUMPTON

"On the Trail of the Bigmouth Bass"

Movement & behavior of bass as revealed by radio

JIM ROGERS

"The Silent Approach to Bass Fishing"

Achieving maximum results with the electric motor

EDWIN MOYER

"Will Bass Stocking Help Bass Fishing?"

A research report on the results of bass stocking

BILL DANCE

"Winning Ways with Plastic Worms"

Tips and techniques on fishing the plastic worm

WILLIAM WEGENER & VINCE WILLIAMS

"Lake Drawdown"

Effect of extreme drawdown on bass populations

JOHNNY MORRIS

"What's New for 1978"

A review of new tackle and equipment

JACK HAINS

"Between the Fish and the Fisherman"

Selection and maintenance of a bass fishing line

JOHN McCLANAHAN

"Obligations of a Bass Guide"

What an angler should expect from a bass guide

RUE HESTAND

"Hydrilla and the Future of Fishing"

A review of hydrilla problems and control measures

BILLY WESTMORELAND

"Trials of a Professional"

Reflections gathered on the bass tournament trail

PHIL CHAPMAN

"Bass Tournaments in the Sunshine"

Results of the bass tournament permit system

SUGAR ROWDEN

"New Angles in Bass Angling"

The Bass'n Gal talks about bass and bass'n girls

SMOKIE HOLCOMB

"At Home with the Bigmouth Bass"

A research report on habitat requirements of bass

SPECIAL ATTRACTIONS

R. V. "GADABOUT" GADDIS

"The Fly Rod and The Bass"

The "Flying Fisherman" talks about fly fishing

ROY MARTIN

"The Science and Sonics of Surface Lures"

A discussion and surface lure fishing demonstration

DALE CRIDER

"Pioneer Ethics and Florida's Bass Fishing"

The environmental minstrel sings of fish & fowl

ANN STROEBEL

"Wonder Woman & her Monofilament Lasso"

A discussion and demonstration of casting skills

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A Question Of Propriety



Revision of the Florida Constitution is currently being considered. One of the matters before the revision panel is the constitutional status of the Game and Fresh Water Fish Commission. The chief argument against the Commission is that it is different.

Why should this one agency have constitutional status which differs from all the others? The following seeks to give you the reasons.

Which is the most important—people or fish (or, people or animals)?” This question has been asked of me dozens of times during the past thirty years. Much of the time it was asked as a put-down in the drawing of battle lines for some “people-wildlife” confrontation. Sometimes the question was asked seriously in an effort to understand this agency—the Florida Game and Fresh Water Fish Commission—that has so often defended wildlife or its environment seemingly at the expense of “progress.”

Some might contend that we as the agency responsible for wildlife should defend wildlife *against* people. A more accurate evaluation would have us defending it mostly *for* people—for all the values furnished by wildlife—hunting, fishing, bird watching, nature study, environmental balance or perhaps of most importance, the simple everyday observance of wildlife by people in general.

Thirty years ago the question was likely to be asked in a rural county by an individual espousing the pioneer ethic that deer, for example, male or female, in or out of season—were here for food and that no man-made law was going to interfere with his getting meat for his family. This philosophy—correct as it may have been during early pioneer times—had to change. Deer simply could not continue in abundance with year-round either-sex hunting under the pressures exerted by improved weapons, easier access, and more people. And it did change as witnessed by the more than tenfold increase in the Florida deer population in the last thirty years.

More recently the question is more likely to revolve around some more intangible environmental issue—such as a permit to dredge and fill submerged land which perhaps was sold to a private individual by the state thirty years ago. There obviously are complex unresolved questions of equity regarding this issue—basically private ownership

versus the public interest—but I am certain that twenty years from now the need for protecting wetlands will be as well understood and accepted as is today the need for protecting deer breeding stock.

For the past thirty-four years the Game and Fresh Water Fish Commission has taken the leadership in conservation matters. The record is filled with instances in which the Commission has been the first or *only* voice in state government speaking out and fighting for causes or positions which—while unpopular at the time—have proven to be correct. Let us examine a few:

1. In 1946 the Commission undertook litigation to correct a pollution problem created by a citrus processing plant in Polk County. The plant management agreed out of court to correct the situation. This may have been the first anti-pollution action brought by a state agency in Florida—certainly it was the first that concerned fish and wildlife.

2. In 1948 the Commission—in order to fulfill its constitutional responsibility to protect the freshwater fish of Lake Okeechobee and the St. Johns River—successfully litigated against a special legislative act declaring Lake Okeechobee and a major portion of the St. Johns River to be salt water.

3. Early in its history the Commission recognized the concept of “endangered species”—long before the phrase was coined—and the importance of wildlife in general, not just wildlife of importance to hunters and fishermen. This is reflected in the following actions: fully protected all hawks except the so-called bird hawks (Coopers and sharpshinned) in 1943; fully protected *all* hawks in 1957; fully protected the Florida panther in 1958; first fully protected the alligator and crocodile in 1950; fully protected the indigo snake and the round-tailed muskrat in 1971; established a list of rare

birds and mammals as early as 1949 and gave them total protection against taking for *any* purpose; restricted as early as 1968 the taking of certain such unlovable creatures as turtles—where certain species in certain habitats were in trouble.

4. The Commission recognized the need for acquisition and management of lands for hunting and other public recreation as early as 1943, and between 1943 and the time that land prices became prohibitive, except in very special situations, moved to acquire 115,000 acres of land in Charlotte and Palm Beach counties.

5. The Commission recognized early that it would be impossible to acquire by purchase enough land to supply the demand for public hunting and that augmentation of public-owned lands by private lands was essential—preferably under an arrangement whereby the landowner would continue to utilize his land for timber, grazing, or comparable

commercial purposes but would allow managed public hunting. This effort paid off with the establishment of the first Wildlife Management Area on private land in 1948 and continued to the present with more than three million acres now in the program. The Commission continues to lead the nation in this area.

6. As early as 1955 the Commission officially recognized the importance of destruction of wetlands and other environmentally sensitive areas by establishing a field office at Vero Beach for the purpose of identifying environmental problems and making recommendations as to how they could best be handled.

7. In 1967 the Commission, after too many “accidental” spills of phosphate slimes in the Peace River, undertook litigation. Thanks to the civic-mindedness and responsibility of the corporation that caused the spill, the Commission settled out of court for \$200,000—more than three times the largest pollution settlement that had been made at that time anywhere in North America—or probably the world.

8. In 1970 when the justification for the Cross-Florida Barge Canal was being seriously questioned—the *only* state agency that did anything but say “hurrah” for the barge canal was the Game and Fresh Water Fish Commission. Even though we addressed only the aspect of the matter for which we were responsible—the fish and wildlife resource—these concerns plus serious questions about the economics and hydrology of the plan—ended in the current almost unanimous support of the abandonment of the canal. Of particular significance in this instance and indicative of the usual calibre and dedication of the membership of the Commission is the fact that the majority of the Commissioners—particularly the two from Jacksonville at the time—personally believed in the canal but fulfilled their responsibility to the fish and wildlife resource and gave their unanimous endorsement of the scientific report outlining the unfavorable effects of the canal upon fish and wildlife.

9. The Commission has consistently supported the right of the private citizens to possess and use firearms as witnessed by its formal resolution in 1975 opposing unreasonable gun registration and control laws.

(continued on next page)

With more than 3 million acres in the program, the Commission leads the nation in the acquisition of public hunting lands. Wildlife Management Areas not only offer recreation for the hunter, but also for birdwatchers and photographers.

By Dr. O. Earle Frye



Photo by Morrie Naggjar

(continued from preceding page)

10. The Commission has consistently opposed anti-hunting efforts that are based on sentiment and misinformation rather than upon accurate facts concerning the welfare of the wildlife in question.

11. The Commission assumed the leadership at the state level in the fight against indiscriminate use of hard pesticides as witnessed by its formal resolution in 1968.

12. The Commission litigated in 1974 and 1975 against indiscriminate stocking of grass carp in Florida's waters—and were instrumental in having adopted a cautious and realistic policy for the possible use of this fish for aquatic weed control.

13. The Commission successfully challenged in the Supreme Court a 1975 act of the legislature which would have negated the responsibility and authority placed in the Commission by the Florida Constitution.

The above record is one of an aggressive and often controversial effort to protect and manage the resource for which the Commission is responsible and to defend the authority mandate by the people of Florida. It is often a record of studied dissent—not entirely a position without merit in a nation conceived in dissent and proud of its heritage of its people fighting for principles and ideals in which they believe.

One is inclined to ask—why has this agency excelled to such a degree? Part of the answer has to be stability. It could not be changed except by vote of the people. Of interest in this connection is the turmoil and instability in the early history of wildlife agencies in Florida prior to the constitutional amendment establishing the Commission:

1913 State Game Commission formed and all local laws repealed.

1915 Commission abolished and local laws reinstated.

1925 Commission established.

1933 Commission abolished and game put under State Board of Conservation.

1935 Game and Fresh Water Fish Commission formed.

1941 Legislature approved Constitutional status of Commission. Program spearheaded by Governor Holland and conservationists.

1942 Commission approved by referendum in general election, and, since the referendum, has retained basically the same structure and authority.

An essential part of its stability is not only stability in its structure but stability in its membership. This is provided for in the Constitution which calls for staggered appointments of Commissioners—one each year. This guards against any governor or political faction expecting instant control of

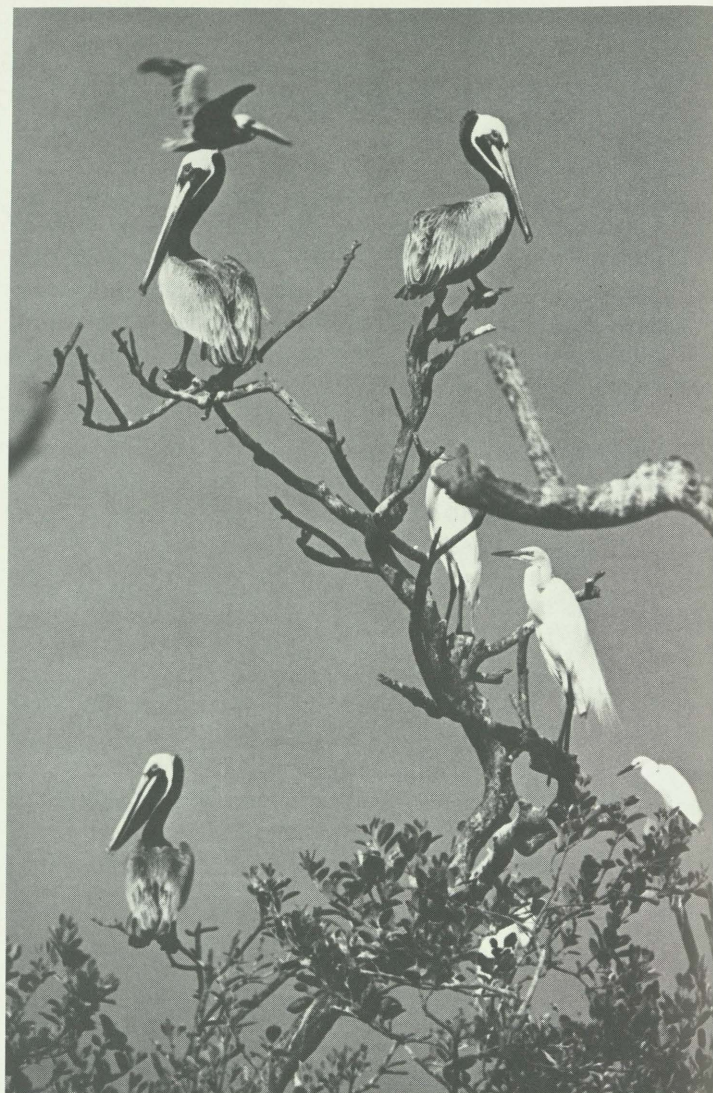


Photo by Lovett Williams

the Commission—and allows for the tempering of new ideas of new Commissioners by the experience of those with more service.

Complementing the constitutional provisions designed to promote stability and the relative freedom of the Commission from undue political influence is the form of the Commission itself and the way it operates.

The members of the Commission are basically successful business or professional men (or they couldn't afford the job) with an interest in wildlife (or they wouldn't want it) and some involvement in the political process (or they wouldn't be appointed). They are closer to and more appropriately represent those individual hunters, fishermen, boaters, campers, bird watchers, nature lovers, etc.—whom they are appointed to serve—than would be a salaried state employee with the same responsibility.

Another extremely important point in favor of the citizen board is that the average board member or Commissioner has only the particular board or commission on which he serves as his primary governmental responsibility. Therefore, he is able to

devote his energy to this specific field and consequently becomes much more knowledgeable than in a situation where a person with diversified responsibilities must depend largely upon an aide or staff member for guidance about a certain field.

We feel that the latter system leads to many decisions being made fundamentally by staff aides who frequently are not professionals in the field they represent. Conversely with a citizen board, the members make decisions on a subject with which they are quite familiar because of the time they have to devote to their particular area of responsibility. Such decisions are made with consideration of the opinion of the staff which is composed of experienced professionals in the area of management of the resource for which they are responsible.

A final extremely important point—from the standpoint of service and accessibility to the people—is the fact that once each month at the official Commission meeting, a person with a problem about wildlife can officially address in person the decision makers themselves—the members of the Commission—not simply a representative of the agency.

A layman board or Commission working closely with a professional staff constitutes the ideal balance between the public to be served and the scientific expertise of the professionals. This position is supported by a study conducted by the Wild-

life Management Institute—a privately financed conservation organization of international stature and influence—which makes the following statement:

"An ideal commission consists of five nonpartisan members serving staggered terms and appointed by the Governor on a statewide basis, as opposed to a district basis. Adequate discretionary legal authority is absolutely essential to manage fish and wildlife populations effectively. Each agency should have: (1) clearly stated organizational objectives in an up-to-date manual of basic policies, (2) dedicated funds supplemented with general funds, (3) sufficient professionally trained personnel, (4) an in-service training program, (5) planning for species, habitats, areas, and future human demands to define and set forth both short- and long-range achievement goals, (6) problem-oriented research within the agency and freedom to contract with outside organizations for basic research, (7) knowledge of the status and distribution of sporting, endangered, and other species and their habitats, (8) management units for handling fish and game populations, (9) programs to maintain and restore fish and wildlife environments, (10) cooperative programs with private landowners, as well as land and water-use agencies, (11) public information and education programs, and (12) staunch support of citizen organizations."

The Game and Fresh Water Fish Commission as now constituted follows exactly the "ideal" as delineated in the above statement.

The constitutional Commission is a creation of the people. It was established through the leadership of the people.
(continued on next page)

Recognizing the "endangered species" concept before the term was widely used, the Commission is vitally concerned with non-game species such as pelicans and egrets (facing page). Florida's waters are tops for freshwater fishing, thanks in part to research, law enforcement, aquatic weed control, habitat protection and Fish Management Areas seen below, which are provided by the Commission.

Photo by Art Runnels



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ship of then Governor Holland and the 1941 legislature in an effort to, among other things, bring some political continuity to the state's conservation program which had been characterized by the previously described history of forming and abolishing agencies—a half-dozen complete reorganizations in thirty years. The Commission is dedicated to the preservation of its constitutional status because it believes that this has served and will continue to best serve the people. Judging from statewide referendums in 1942, 1960 and 1968, this is the way the people want it—and it has worked.

There have been two separate votes on the issue of the constitutional status of the Commission—in 1941 when 61.5% of the voters and 30 of 67 counties approved the constitutional status and in 1960 when 66% of the voters and 44 of the 67 counties approved the Commission. There was no separate vote on the issue in the 1968 referendum.

As mentioned earlier the principal objection to the Commission status is that it is different. In all fairness there will be governmental theoreticians who may point out that it is technically improper since it combines under one agency both regulatory and executive functions. Our principal answer to this is that it has worked admirably for fish and wildlife—and this is apparently the way the people of Florida want it. Of interest in this connection is the following statement from a 1977 publication of the Wildlife Management Institute:

“The number of state boards or commissions having full regulatory power continues to rise, with 37 now having this authority.”

Authority under which the governing boards or commissions operate is defined in eight state constitutions—Florida was the second state to pass a constitutional amendment granting constitutional authority to its fish and wildlife agency.

To summarize the pros and cons:

REASONS FOR DELETING CONSTITUTIONAL AUTHORITY OF THE COMMISSION:

1. It is different.
2. Why should the Commission be in the Constitution?
3. The Commission has more confrontations with the political power structure than other agencies.

REASONS FOR RETAINING THE CONSTITUTIONAL STATUS OF THE COMMISSION:

1. Stability, continuity of programs.
2. Proven leadership and accomplishments.
3. Record of correct decisions—often when such decisions were not popular or at the time politically expedient.
4. Has endorsement and support of the people of Florida, especially those with an interest and concern with wildlife and environmental quality.

5. The confrontations with the political power structure have been beneficial to the fish and wildlife resource.

The final question—Why should the Commission be retained as a constitutional body? If it were removed from the Constitution the Legislature could establish an *almost* identical system by statute and would probably do so. The “almost” is the key.

A careful review of the record—particularly the six complete reorganizations that took place in less than 30 years—indicates that too much change would prevail in a field where stability is paramount. Why is there such a tendency to *redo* wildlife agencies? The three principal reasons appear to be: (1) the emotional and frequently highly controversial nature of wildlife issues—the hunter, fisherman, bird watcher; the visitor or migrant from the north who sees his first alligator on his lawn; the small child—and his mother—who rescue a baby bird from the cat all can become very concerned about the *life* which forms the basis of his interest; (2) the built-in conflict between rural areas—where more wildlife lives, and urban areas—where more people live, especially those who wish to hunt, fish or otherwise enjoy the rural wildlife. This situation needs the calming influence of an arbiter with statewide interest and authority—not impassioned oratory designed for local consumption; (3) Perhaps most important is the simple fact that wildlife is small potatoes when weighed in the legislative forum against such things as education, roads, taxes, etc. and is highly subject to control or decision by a minority rather than the Legislature as a whole.

In closing, let me leave you with this thought:

**We trained hard, but it
seemed that everytime
we were beginning to
form up into teams
we would be reorganized.
I was to learn later in
life that we tend to meet
any new situation by
reorganizing—and a
wonderful method it can
be for creating the
illusion of progress while
producing confusion,
inefficiency,
and demoralization.**

By Petronius

dated 210 BC

Fishing

Too Hot - Too Cold - Too Bad

Generalize if you will about ideal water temperature for fishing, but the fish don't always conform.



By CHARLES WATERMAN

Fish that are too warm or too cold don't bite well and optimum temperatures are about the first goal for good fishing. Real extremes either way can do a lot worse than slow up the striking. The following observations are not exactly a scientific breakthrough but summarize some facts taken for granted by biologists—and careful fishermen who carry thermometers.

Last winter when Florida had tremendous fish kills of saltwater fish, you could get all sorts of arguments about the extent of damage. There is no question that some of the brackish shallows in the northern part of the state have given up enough fish to have effects that will last for a few seasons at least.

A great many dead and dying fish were utilized by people who scooped them up by hand or with landing nets and shrimp nets. I believe, however, that many of the fish "saved" for the skillet would

have recovered if left alone. Biologists tell me that as long as a fish can maintain its equilibrium and doesn't turn on its side or back it is probably capable of recovery if the water gets warmer soon.

Many of the fish, notably snook, that were scooped up during last winter's cold, were upright, however sluggish. At the time, no one could tell whether additional cold would wipe them out or whether a warming trend would save them. Charles Ernst, the Merritt Island angler, reports having inspected a number of snook in local canals, fish so benumbed they could hardly travel. When the temperatures rose slightly the snook that had

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Miles of inland waterways were lined with tiny dead mullet during a period of severe cold last winter. No one knows yet just how much the all-important food chain was disrupted by this occurrence.

Photo by Charles Waterman



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been finning feebly near the surface disappeared, apparently nearly back to normal. If those snook had been netted at the time it would have been an unnecessary loss.

Fish that had turned belly up were probably goners before higher temperatures could save them.

It may be that such severe cold does as much harm through food chain damage as through actual destruction of catchable fish. For example, much inland water was speckled with untold thousands of tiny mullet with no one but some overstuffed birds gaining from the situation. We don't know how much harm is being done by the loss of that great number of fingerlings. Undoubtedly much smaller organisms were lost, important links elsewhere in the chain.

Of course we've had similar fish kills, undoubtedly worse ones, and records are skimpy. We know that, given several years of warm weather, some species of fish wander farther north than they should and become well established, only to be eliminated when a real orange popper comes along. Snook and tarpon are noted for that.

There seem to be two reasons why smaller fish suffer most from the cold. One is that the smaller fish simply chills through quicker and dies whereas a larger one might make it. The other reason is that larger fish, better oriented as to their locations, able to move farther and faster and evidently possessed of additional instincts, tend to gain deeper and warmer water without being stricken. There are many stories of large tarpon, for example, leaving the back country bays with the onset of cold weather and evidently going offshore while the youngsters die.

Under less grim circumstances, fishermen can take advantage of heat and chill in locating fish that have large areas to move in. Overheated fish act somewhat like overchilled ones.

Deep water is likely to be warmer than shallow water during short cold spells and fishermen search for it. Not only is the deeper water some degrees warmer than shallow water, it is likely to move less in inshore areas and a feeble fish can handle its more gentle currents. When the sun comes out, however, very shallow areas will warm first and if the fish are active enough to travel that's likely to be where they are.

Fishing authorities used to be much more specific about heat and cold extremes than they are today. It has developed that a given species can take more heat and cold than early experiments showed *if he is given time to become accustomed to an extreme through gradual chilling or warming*. And even in a given latitude there are individuals that will feed when the water's warmer or colder than we thought they could handle.

For example, in the Welaka area, a little north of center of the Florida peninsula, I have been told

that it was impossible to catch a bass on an artificial lure with the water temperature below 50. I had proved that wrong myself but I got a real jolt last winter when the B.A.S.S. tournament was held there at a time when line was freezing in the guides. The tournament anglers caught a lot of bass, some of them big ones, on a day when a feeder canal's temperature was 42 degrees. Of course they found some warmer spots but I'm sure some of the fish came from water in the low forties.

"Good" bass fishing in Florida is supposed to begin around 65 degrees. Go farther north and it begins at 55 or even less. The fish are acclimated to it.

I don't know how hot the water can be and still sustain Florida bass and panfish but it's unlikely to kill them, even in our hottest summers. Freshwater trout can't take hot water, performing at the hot end of the thermometer about like Florida fish at the cold end.

When water is cold, a fish's metabolism slows down and he doesn't need much food, if any. The same thing happens when he gets too warm. Hence, the smaller and slower baits are used in hot and cold weather. We can't go so far as to call it hibernation in most cases but many gamefish get pretty close to it.

There's an increase in what I call "longnose" flies, simply streamers with the feathers or hair beginning well back from the hook's eye, sometimes tied on a long shank. This got started with some saltwater fishermen who wanted the streamer tied so that the feathers wouldn't flop around and foul the hook in casting.

Since the object in saltwater fly fishing and some spinning and plugging is to make a lure appear as long as possible, it follows that by using an extra-long hook and tying a "head" on it you could give an illusion of greater length without much added weight or air resistance. I have been using some streamer flies made that way, the "heads" made up of wrapped thread coated by considerable enamel and decorated with painted eyes. Pleasant to cast and appearing long in the water.

George Radel, who fishes in south Florida each winter, makes some beauties of that type.

Line twist is a curse, whether caused by a lure or by careless handling. Some lures twist a line as they are retrieved and others do it in the air while you're casting.

Most spinning reels will twist the line if you crank while your line is being paid out against the drag by a running fish. Some of the pushbutton models have a star-type drag on the handle. With those you can crank all you want to while the fish runs if it makes you feel better.

Many fishermen who know better will crank a spinning reel while a fish sulks, partly because of absentmindedness but sometimes because they keep thinking the line is going to start taking up. If they fail to move the fish they twist things. Even when pumping it's possible to get too crank-happy.

One big Australian surf spinning reel we've talked of previously twists the line because the spool is turned to "conventional" position as you reel in although the line is paid out over the end of the spool as you cast. However, the reel is so large that the twist doesn't cause much trouble. An early American spinning reel which operated that way with a small spool really fouled things up fast and went off the market.

British fly reels retain their prestige among trout anglers although the Americans make most of the bar-stock big-game fly reels.

The British reels are a bit on the expensive side and some fishermen wouldn't be caught with anything else because of the tradition and the fine tolerances. Are they worth the difference?

The workmanship is there all right and there's some special pleasure in ownership. For most fishing, an American made or Japanese single action fly reel is quite adequate. It's like a British shotgun which costs more than a new Chevrolet. It's a joy to own but probably won't shoot better than a mass-produced pumpgun.

It's stylish to write that, unless you're after heavy

fish, a fly reel is just to hold the line and isn't important. That's almost but not quite true.

Scorned by the elite, the automatic fly reel has a real place in fishing for bass or panfish from a boat where it will keep the line out of the way. It is also a big help when walking a bank with weeds or brush, as along some Florida canals. If the fish is likely to run very far, forget it.

In single action reels for bass, trout or panfish, the amount of drag adjustment isn't too important since the way you hold the rod tip can increase or decrease your drag dramatically—and you can play a finger or thumb on the spool—or even slide the line through your fingers for a short run. However, you must have enough drag that you can yank off line without causing the spool to overrun and backlash.

I owned one English reel with a drag that was so light I repeatedly caused overruns by pulling line off fast when trying to cast to sighted fish.

The other day I got into big trouble while snook fishing and using a Zwarg reel of all things. The Zwarg (same as the earlier vom Hofe) is a wonderful precision instrument but it's been around a long while and the drag has worn. A big snook made a rush and the reel overran and tangled my line. I was handcuffed.

You don't need an expensive single action reel for light saltwater fishing or bass fishing but be sure it has enough drag to avoid backlash.

First thing you do with it is tighten the screws and nuts. ●

Photo by Charles Waterman



The longnose fly gives a long silhouette with minimum wind resistance, and the "beak" doesn't pick up water on the retrieve. The hook is so far forward, the feathers won't foul on it.

Conservation Scene

OFFICERS CITED

The Polk County Cattlemen's Association has expressed appreciation to Game and Fresh Water Fish Commission Law Enforcement Investigators Don Arnold, Don Hudson and Sergeant John Ward for their efforts in breaking up a troublesome cattle rustling ring that had been plaguing Polk and Highlands counties.

The officers, all from the South Florida Region, were each presented with \$100 by the association's president, Harris W. Fussell.

The investigation that resulted from complaints by concerned citizens and information received from confidential informants culminated in the apprehension of three men who had in their possession a 900-pound Hereford bull.

The arrest not only broke up the rustling ring, but also a possible illegal deer market, 43 breaking and enterings and fire-arm thefts.

One of the men admitted to heisting 43 cattle and poaching and selling a considerable number of deer.

Two of the men are presently serving jail terms of two and three years and the third is out on five years probation.

SPILL PAID FOR

The State of Florida has received more than a quarter of a million dollars for damages resulting from phosphate wastes spilled into the Peace River in 1971.

At the time, an estimated two billion gallons of clay and slime from phosphate processing burst a dam and poured into

Whidden Creek and the Peace River, destroying a substantial number of fish and other aquatic life.

Since then, three agencies and the Governor's Office have been in and out of court seeking damages from Cities Service Company, owner of the slime pond and processing plant at the time of the break.

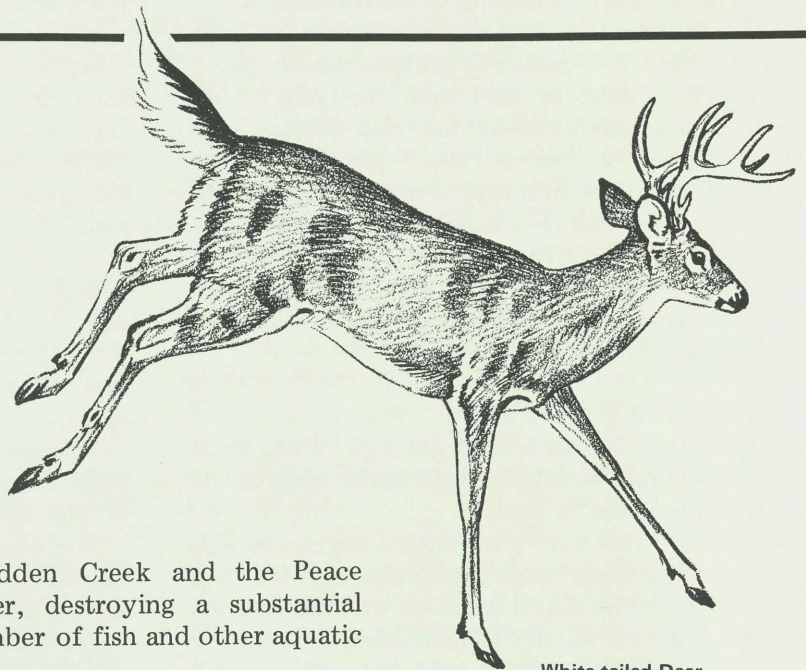
In July, the company settled the claim out of court and paid \$298,929, of which \$200,000 will go to the Game and Fresh Water Fish Commission for the cost of stocking the river and creek. The remainder will be placed in the Department of Environmental Regulation's Pollution Recovery Trust Fund for use in restoring polluted bodies of water.

DEER BOOK

FW's hunting columnist, Charley Dickey, has come up with another book—this one concerned with putting venison in the pot.

Step by step Dickey leads the reader through the deer's life cycle, placing the emphasis on behavior during the hunting season.

He also discusses such subjects as finding a place to hunt and what to do when you get



White-tailed Deer

there. Guns, hunting clothes and accessories, techniques of scouting and various methods of deer hunting are given a going over.

The section on field dressing and care of meat and trophy will be especially welcomed by the not-too-experienced hunter. It's an excellent guide to the basic techniques of bagging a white-tail deer.

If you can't find it locally, **DEER HUNTING** by Charley Dickey is available in softcover from Oxmoor House, P.O. Box 2262, Birmingham, Alabama 35202. Price is \$3.95.

PROFIT HUNTING BUST

Officers of the Game and Fresh Water Fish Commission have broken up a profit hunting ring operating in St. Johns and Duval counties.

Lt. Col. Brantley Goodson, director of the Commission's law enforcement division, said a 10-month investigation has resulted in the arrest of five persons involved in the illegal killing and possession of both deer and black bear.

"The arrests, made during August, were the result of a well planned operation by our Investigations Section," Goodson said.

During the course of the investigation, Commission undercover officers seized portions of more than 18 deer which were killed illegally and reportedly sold for \$50 each.

In addition, wildlife officers seized portions of four black bear, allegedly killed by the group. The black bear, Goodson emphasized, is classified as a

threatened species in Florida.

One of those involved, a taxidermist, was charged in connection with illegally possessing black bear skins which he was allegedly mounting as trophies.

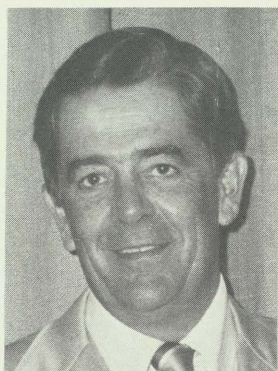
Charges against the others include taking deer during the closed season, selling deer, criminal conspiracy and unlawful possession of black bear.

Arrested were Kenneth and Joy Scott of Palm Valley, Bradley Reed of Jacksonville, Milford Stratton of Ponte Vedra and Cris Cantlon of Bayard.

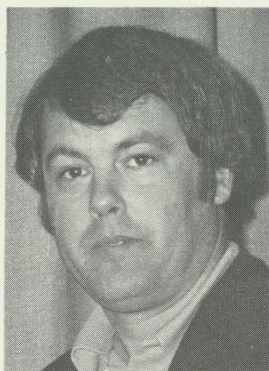
NEW COMMISSION CHAIRMAN ELECTED



Thomas



Rhodes



Parrish

Dr. Donald G. Rhodes was elected chairman of the Game and Fresh Water Fish Commission at the July meeting in Homosassa. R. Bernard Parrish Jr. of Tallahassee was elected vice chairman.

Dr. Rhodes received the gavel from Randolph R. Thomas of Jacksonville who held the post for the past two years. Parrish took over the vice-chairmanship from E. P. "Sonny" Burnett of Tampa.

Rhodes, 43, is a dentist from West Eau Gallie. He was first appointed to the Commission on December 12, 1974 to fill out an unexpired term. He was appointed to a full five-year term on January 18, 1976.

A native of Windsor, N.C., he received his bachelors degree from East Carolina University and his D.D.S. from the University of North Carolina Dental School. He practiced dentistry in the Air Force from 1969 to 1971.

He holds membership in the American Dental Association, Florida Dental Association, Central District Dental Society and the Brevard County Dental Society of which he is a past president. He is also active in the Lions Club, Kiwanis, Rotary, National Rifle Association and Ducks Unlimited.

Parrish was appointed to the Commission in January of this year. The 34-year-old Titusville native was a former special assistant to the Governor from 1970 until July 1976. He is currently a business consultant in Tallahassee and owns a John Deere dealership.

TOSOHATCHEE PROPOSAL

A "wilderness experience" hunting proposal for the recently acquired Tosohatchee Game Preserve was unveiled on July 21 to aides of the Florida Cabinet by the Game and Fresh Water Fish Commission Office of Environmental Services and the Division of Wildlife.

The Tosohatchee Area, until recently a private hunting preserve, was bought by the state with Environmentally Endangered Lands money. The purchase was strongly supported by the Commission because of its size (28,000 acres), stands of old cypress and pine, expanse of St. Johns River marsh, populations of endangered or threatened species and its potential for a low density, high quality hunting area compatible with other uses.

The hunting proposal consisted of three, three-day weekends of archery hunting and one weekend of muzzle loaders with only limited vehicle access.

In addition to providing the opportunity for a high quality hunting experience, this proposal was designed to insure a minimum impact on the area's wildlife populations.

The morning after the presentation, the cabinet aides and representatives of conservation organizations were shown the Tosohatchee by Commission biologists. Instead of a large caravan, the party split into small groups which independently toured the area to increase the chances of observing the wildlife that made the Tosohatchee such a desirable purchase. The idea worked well and most groups observed a variety of wildlife and learned more about the management options of the property.

The final management plans, including whether or not to allow hunting, are as yet undecided. The Game and Fresh

(continued on next page)



FLORIDA WILDLIFE

Dedicated to the appreciation and enjoyment of our wildlife heritage, and to a fuller understanding of efforts directed toward the protection, restoration, enhancement, and wise use of our natural resources.

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R. BERNARD PARRISH, JR.
Vice Chairman
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Water Fish Commission, in presenting and explaining a professionally conceived interim proposal for one aspect of management, should make future decisions a little easier.

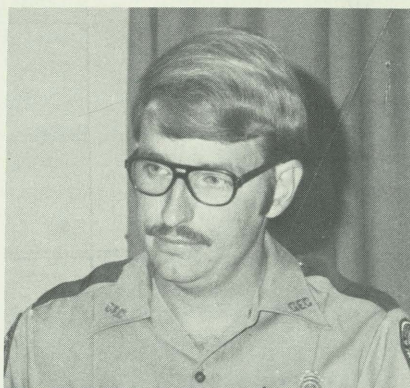
OUTSTANDING OFFICER

Wildlife Officer Paul Hoover stationed in Dixie County has been named "Outstanding Wildlife Officer of the Year."

The announcement of Hoover's selection was made at the July meeting of the Game and Fresh Water Fish Commission in Homosassa.

Hoover has been employed by the Commission since 1973, beginning as a game manager with the Division of Wildlife. He transferred to Law Enforcement in 1974 where he has proven himself to be an excellent representative of the Commission.

Professionalism, confidence, productivity and judgement were some of the qualities upon which



Hoover

the annual recognition award is based. Hoover was selected from a group of outstanding officers representing each of the state's regions.

Hoover will represent Florida at the October meeting of the Southeastern Association of Fish and Wildlife Agencies.

Other wildlife officers in the final selection for the award included C.W. "Jerry" Daniels, South Florida Region; Billy Ray Smith, Northwest Region; L. David Wilson, Everglades Region and John M. Campbell, Central Region.

REDBREAST RECORD



Cason and Record Catch

Ft. White angler Tom Cason, Jr. has recently claimed the state record for redbreast with a 1 lb., 8½ oz. specimen.

The prize bream hit an Abu Reflex spinner. Cason was fishing in the Gilchrist County section of the Suwannee River.

The Commission only recently began compiling records on fresh water fish and many of the categories are still open with no official record yet listed.

Details of the records program are available from FLORIDA WILDLIFE or from the regional offices of the Commission listed elsewhere in the magazine.

A special certificate is awarded to anglers taking state record specimens.

FLORIDANA

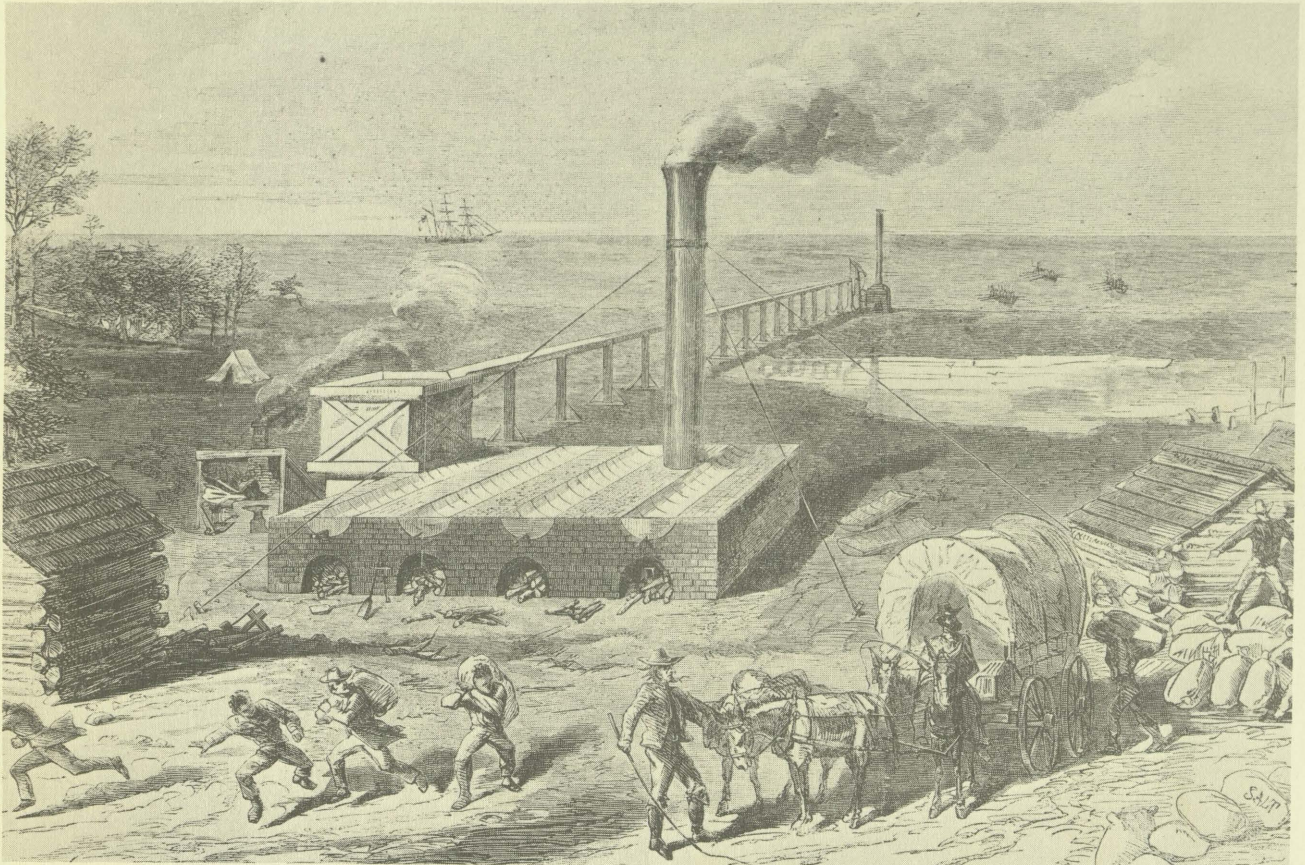
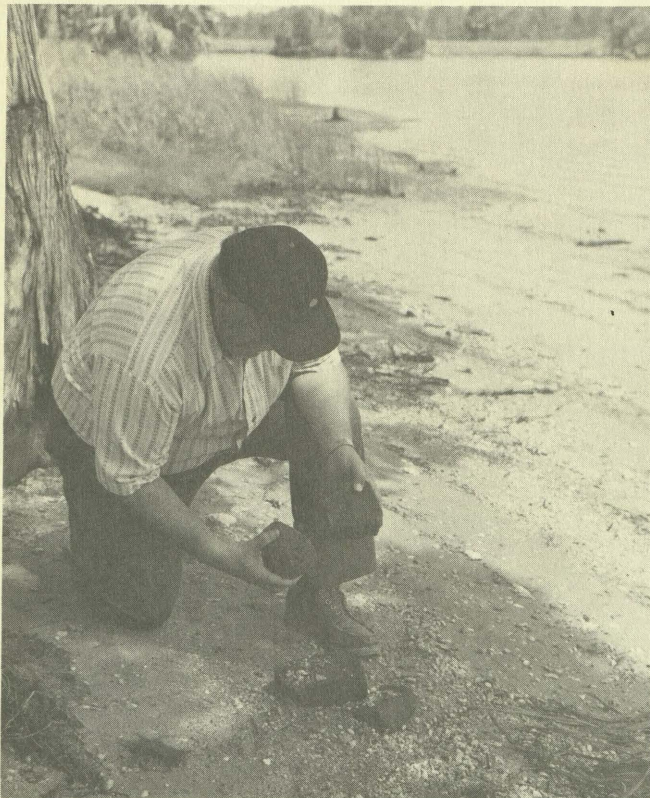


Photo: Strozier Library, Florida State University

CONFEDERATE SALT WORKS



During the Civil War, salt was a vital commodity to the Confederate States. Florida, with its miles of coastline, deeply cleft with a myriad of inlets, was ideally situated for extraction of the valued substance from sea water. A sizable industry sprang up along the Gulf side of the peninsula, especially that portion northward from Cedar Key to St. Andrews Bay.

Numerous incidents, small and almost forgotten against the backdrop of the major actions elsewhere, involved efforts by the Union to disrupt salt production. One such is shown in the contemporary engraving reproduced above.

Occasionally, even today, you may run across a scattering of bricks and shaped limestone debris mouldering in some coastal marsh or along an isolated tidal creek.

It's not much of a memorial, but it's all that remains of an industry that flourished during some trying times in Florida's history.



FLORIDA DOVE HUNT

From a painting by Russ Smiley

Swift awing, topnotch on the dining table, the streamlined mourning dove ranks high with Florida shotgunners.

One of a series of limited edition 20" x 30" prints by Russ Smiley, each signed and numbered by the artist. Free catalog available, address Russ Smiley, 12000 N.W. 22nd Place, Miami, Fla. 33167